Presented to
The Chester County Medical Society,
By Wm Darlington.

Notes
taken from the
Lectures of
Philip Syng Physick, M.D.
on
Surgery.

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in the Winter of
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"Suaviter in modo, fortiter in re."

Lectures on Surgery.

Lecture 1st. November 15th. 1803. — Doctor Physick's Introductory Lecture comprised an account of the nature and design of his course. of some of the principles of the art which he proposes to teach. and he also expatiated with much propriety on the importance and necessity of a practitioner of physic being acquainted with the principles of Surgery; and also of having a correct idea of the operative part; more especially it was shewn that this knowledge is essential to the practitioner who resides in the country.

Lecture 2nd. Novem. 10th.— Unless Wounds heal by the first intention, Inflammation is absolutely necessary to that effect. Inflammation in Scrophula and Cancer is combined with a peculiar mode of diseased action. Dr. P. considers, at present, what is called Healthy Inflammation. Inflammation is attended with pain, tenderness, &c.— Remote causes, are Chemical, or Mechanical. Fever is also a remote cause. The Chemical remote causes of Inflammation, are heat, cold, corrosive substances, &c.— The Mechanical, are stretching, straining, bruising, &c. The same remote causes will produce different appearances in different constitutions; but different remote causes produce effects somewhat peculiar to themselves;— as a puncture in the scalp will generally produce Erysipelas,— Whereas an incision produce simple

simple Phlegmasia. A Blister cures Erysipelas by exciting a new action in the vessels of the part. Inflammation is divided into Adhesive, Suppurative, and Ulcerative. Vide J. Hunter on the Blood. Pt. of the Adhesive Inflammation. The vessels are enlarged near 1/3 of their natural diameter. The swelling is in part owing to this enlargement, and in part to the extravasation of Lymph. The heat of an inflamed extremety never exceeds that of the source of the circulation. Lymph is changed in passing through inflamed vessels; for it does not mix with the blood when effused on the internal surface of a vein. — Adhesive inflammation sometimes terminates by the vessels recovering their natural size - the inflammatory action ceases. This is called Resolution. Sometimes it terminates in Schirrus. At others in a secretion of serous fluid; as when blisters are

are applied,- and in cases of Hydrocephalus, Hydrothorax, &c.- Hemorrhage from a vessel of the part inflamed, or its vicinity, will often terminate inflammation; as from the ure:thra in inflamed bladder - from the hemorrhoid:al veins in cases of piles, &c.- There are some cases in which resolution should not be attempt:ed; as in some wounds in warm weather, - for fear of Tetanus; - or where there is constitution:al disease. That inflammation which occurs occasionally in the eyes after fever, terminates in opacity sometimes from want of suf:ficient bleeding, which was withheld un:der the idea that the patient was too weak to bear it. In like manner, Fistula in Ano has been induced by suf:fering inflammation and imposthume of the buttocks to take their course with:out depletion. These facts demonstrate the importance and necessity of bloodletting in inflammations.

Lecture 3rd. Novem. 22nd. — Inflammation consists in an increased action of the vessels of a part, and in an increase of the diameters of the vessels one-third — attended with heat, tenderness, tumefaction, &c. — This last is owing to extravasation of lymph, and the enlargement of the vessels. That inflammation which is the consequence of wounds, when carried to excess, should be moderated by moderating the action of the vessels, and removing irritating substances: but to do this we must not cut, nor enlarge the wound much. The action of the vessels is moderated by bloodletting, purges, &c. with antiphlogistic regimen. The action of contraction in the vessels is very different from that of Inflammation. — Rest is of great importance; also a proper position of the limb. Local bleeding is often useful. Application

application of cold is proper when the (13)
heat is very considerable;- but as soon as
it irritates, or becomes painful, it should
be removed:- For, says Dr. P., although cold
be a sedative to a certain degree of ap:
:plication; i.e. while it moderates the
pain and heat,- yet as soon as it irri:
:tates it becomes a stimulant. Prepa:
:rations of Lead, as local applications, in
poultices, are proper. Cold vinegar is very
good for burns. Dr. P. prevented a blister
in his own finger by holding it in cold
vinegar. Sal Ammoniac is not very be:
:neficial - is no better than vinegar. - Fo:
:mentations, with flannels wrung out of
hot water, &c. - Poultices, either simple
or medicated. The former, as of bread & milk,
or, what is better, flaxseed meal. And the
latter, simple poultices with the addition
of medicines. A blister over the part is often very

very good; especially where Tetanus is suspected, - and to the fore-arm in case of Inflammation of the vein after bleeding, and in Erysipelas. — <u>Suppurative Inflammation</u>. When the pain attending suppuration is very severe, opium and emollient poultices are good. An <u>Abscess</u> is a circumscribed tumor containing pus. Where Abscesses <u>point</u>, and proceed properly, they may be allowed to open of themselves; - but where they proceed very slowly, and show no disposition to point, they should be opened by the Surgeon. In Paronychia, the sore should be opened. A headache from an abscess in the leg was cured immediately by opening the abscess. Abscesses on the <u>face</u> should be opened early; as also those of the throat, which impede respiration. There are <u>two</u> modes of opening abscesses, viz. by <u>Incision</u>, and <u>Caustic</u>. The former is commonly the

the better mode; but fears sometimes [17] prevent. In those cases they may be opened by the caustic vegetable alkali in solution applied over the thinnest part of the abscess. It forms an eschar.

Pus - is a mild, milky fluid, secreted from the blood by the vessels of the part.

Ulcerative Inflammation, is when there is an absorption of the solid parts. - owing to the increased action of the absorbents. Simple pressure, long continued, will cause an ulcer. Ulceration is attended with some degree of inflammation, always.

Lecture 4th. Novem. 25th. Besides the Phlegmonic, there is the Erysipelatous Inflammation. It is seated in the Cutis vera. Sometimes it spreads all over the body. The skin feels thickened. The inflamed vessels only extravasate serum. When the cellular membrane

is inflamed by it, which sometimes hap-
-pens, the pus is poured into the cells, and
spreads over the body, sometimes extensively.
The remote causes, are nearly the same
with those of other inflammations. Uncto-
-ous applications are bad. Meal sprinkled
on is very proper. A blister, right over the
part affected, is sometimes good. Mortifi-
-cation of the cellular membrane occurs
sometimes. Adematose Inflammation
occurs sometimes, in the eyelids. A
Carbuncle is produced by a kind of
Inflammation. Mammary Abscess
most frequently takes place within 3
months after Labor; but women are
subject to it as long as they give suck.
It comes on sometimes, like a tumor.
Remote causes. Injury from compression,
&c. Cold, distension with milk, &c. In the
early stage it is easily cured, by bleeding, cathartics

cathartics, and cooling poultices, blisters (21)
on the inflamed parts, mercurial inunction,
&c.. Rubefacients are doubtful remedies..
If an abscess form, and do not open readi:
:ly and completely, it should be opened
with a lancet and a poultice applied.
In an Oedematose inflammation of the
breast, when the usual remedies failed,
a blister succeeded.. Paronychia - has
been known to end in the loss of the fing:
:er, of the hand, arm, and finally, in
some cases, in death. It is seated a:
:bout the nail; sometimes in the skin,
sometimes in the cellular membrane,
sometimes in the theca of the tendon,
when it has extended under the an:
:nular ligament at the wrist. Remote
causes - are difficult to ascertain. The bite of
a squirrel has caused it. Cure - open it
early - let it bleed ad libitum - & apply a poultice..

Lecture 5th. Novem. 29th. — Mammary [23]
abscess is sometimes seated superficially, sometimes deeply. Burns and Scalds. — A certain degree of heat only thickens the skin — or occasions an extravasation of Lymph. But if great, as 212° of Fahrenheit, the texture is destroyed. Those disorders are worse in Children and old people than in the middleaged. As soon as a part is scalded, put it in cold water; or, what Dr. P. prefers, vinegar and water. Lead water, or holding the part before a moderate heat, will prevent blisters. If the pain be violent, use opiates &c. — In case of eschar from burning, &c. it ought to be cut through in several places, or it will do mischief, when bad. One patient died with Tetanus. They are liable to become fungous. They must then be treated with

with a solution of Lunar Caustic - wash=
=ed with lint dipped in it. We should
always be careful, in dressing wounds, to pre=
=vent improper adhesions; - for parts have
grown together by laying in contact. - as
the penis, scrotum, and thigh. We should par=
=ticularly watch canals; as the Urethra, &c. -
and prevent their closing, by means of
bougies, &c. — Mortification - Dr. P. considers
both dead and dying parts under this head.
The term Gangrene, however, has been used
to express dying parts; or their condition. —
Mortification is of 2 kinds - That which
is preceded by inflammation, and that
which is not. In cases of Mortification,
where the system sinks from the begin=
=ning, give bark, wine, &c. - A certain
degree of Inflammation is proper. Mo=
=tification sometimes occurs without apparent cause.

cause. Certain applications, as Sinapisms, &c. sometimes cause it. Urine, and Wine in the cellular membrane, generally cause it. The dry gangrene in old people has been cured by Opium. Never disturb mortified parts; they will slough themselves. Inflammation and Mortification are sometimes occasioned by pressure; as of the sacrum, &c. in persons confined to one position in bed. Treatment of Mortification — In Mortification from Inflammation, during the inflammatory stage, use antiphlogistic regimen & remedies. Avoid stimulants when a part is tending towards Mortification — Use local sedatives. When the action is reduced, give Bark and nourishing diet. Antiseptics have no effect on the living solids; or if they have, it is a bad one, — as may be seen by using a salt poultice.

poultice. When parts are dead, (29)
poultices with charcoal are good.
The Fermenting poultice is made by
mixing together flour, water, yeast,
and powdered charcoal. Carbuncles
are a kind of mortification which
is not preceded by Inflammation;-
or rather, it is preceded by an Inflam:
:mation which tends rapidly to a state
of gangrene and mortification. —

Lecture 6th. Decem. 6th. — Wounds. A
wound is a breach of continuity, communica:
:ting externally; and always attended with a
greater or less discharge of blood. Wounds are
simple incised, or contused. Those made
by a sharp smooth instrument are attend:
:ed with greater hemorrhage than contused,
or lacerated wounds,- for these reasons-
In simple incision the injury does not
extend into the neighboring parts, and the

the action of the vessels is continued with /31/
~~Rou~~ its natural force. The hemorrhage con:
:tinues until the vessels contract from
syncope, &c. - But in contused wounds
the surrounding parts are injured. The blood
is effused round the vessels, and presses them,
as is the case in Thrombus, &c. The blood
also coagulates when it comes in con:
:tact with dead matter more readily - &
thereby the ends of the vessels are plugged.
The first object in the treatment of
wounds, is to prevent the loss of blood.
Press upon the vessels; or use a Tourniquet.
Wash the wound with sponge & water. Take
up the bleeding vessels with a tenaculum,
and apply a ligature to each. Bring the
lips of the wound together by strips of ad:
:hesive plaster. They are better than sutures
for several reasons. There should be an open:
:ing left for the discharge of extraneous
matter. When the vessels of an extremety
are

are divided so high that a Tourniquet (33)
cannot be applied above, press the finger
on the vessel until it contracts;- Or if
the Tourniquet should break, while on the
Arm or leg, press on the brachial or in=
=guinal arteries;- The first where it passes
over the first rib;- The second in the groin.
Wounds made with Glass are generally sup=
=posed to be poisoned;- but it is owing to small
spicula of the glass remaining in the wound,
irritating it. This is the only exception, in
cases of simple incision, to endeavouring to
heal or unite by the first intention.
Here, a copious suppuration must
be induced in order to carry off the spicula.
In cases of transverse wounds on the
knee or finger joints, they must be
kept extended; or union will not take
place.- In Lacerated, or bruised wounds,
Inflammation must be moderated
by

by the usual antiphlogistic treatment. /35/
In cases of punctured wounds, in warm weather, the system must be supported by cordial remedies. A certain degree of inflammatory action is necessary to prevent Tetanus. A puncture is a deep wound with a narrow or small opening. It should not be dilated, nor extended, except in case of a punctured artery; when it must be divided, and tied: or unless Tetanus be apprehended. — Sutures are to be used in wounds of projecting, or pendulous parts; as of the ears, lips, tongue, &c. — & in penetrating wounds; as of the abdomen, when the peritoneum is divided, — for unless the edges of the wound be brought together, in this latter case, the patient will be liable to Hernia at the cicatrix. In wounds of the Thorax where a vessel is divided, & cannot be stopped otherwise, pass a ligature round the rib, & press it against the rib. —

should always be applied above the elbow on the arm, and above the knee on the leg. A compress should be laid over the artery, under the Tourniquet. In wounds of the limbs where it is necessary to take up the artery, as the radial artery, for instance, it should be drawn out with a tenaculum, and a Ligature passed round it, — not only on the upper end, but also on the Lower; for the anastomosing branches will bleed through it, if not tied. Sometimes the ligature gets off the end of the artery. [This was supposed by Mr. Cooper to be owing to the pulsation of the artery; — but Dr. P. thinks not; for it was found by Mr. Cooper to be off the lower end; — and it is not probable the pulsation was great enough there to throw it off. Dr. P. thinks it cuts through the coats of the artery.] In this case, after

after a knot is tied, pass a needle through
the end of the artery below the ligature,
and carry one end of the ligature
through with it, and then tie another
knot. This effectually prevents it from
coming off. Let the ends of the ligature
hang out of the wound, and bring the
sides of it together; where they may be
kept by adhesive plaster. Lay a pledget
of Lint, spread with simple cerate, over it;
then a larger pledget, or compress, and con:
:fine them all by a roller.. In wounds
where sutures are more proper, the
interrupted and twisted sutures are
preferred by Dr. P.. In making the interrupt:
:ed suture, the knot should be tied on one
side, and not over the wound; or it
will irritate it. In three or four days
they may be cut, and drawn out.
To make the Twisted suture, we should
have

have silver pins, with steel points, which 41
will come off. Bring the sides of the wound together, and take good hold of both with the pin. When the pins are through properly, take off the points, and wind a ligature round them in the form of the figure 8. The points of the pins are taken off because they might injure the patient or Surgeon, or be inconvenient in dressing, &c. When it is proper to remove the suture, say 3 or 4 days, just draw out the pins, and the ligatures lay loose on the wound.

In cases of fracture, or division of the Tendo Achillis, the foot should be extended on the leg in order to approach the lower end of the fractured tendon to the upper. The knee should should be bent to relax the gastrocnemii muscles, and suffer the upper end to approach the lower.

A

A long compress, or strip of linen, dou-/43/
-bled over the toes, and carried under the foot, round the heel and along the calf of the leg, under the ham and thigh, is to be confined by rollers so as to keep the foot and leg in the proper position. There are two objects in the dressing— One, to get the parts in a proper posi-
-tion, and the other, to apply such band-
-ages as are proper to keep them so.— One roller is applied round the foot. One round the thigh. And another round the calf of the leg so as to press down the bellies of the muscles, to favor the po-
-sition and rest of the tendon. However, previously to this, the wound should be dressed. Take care to keep the skin from wrinkling and getting in between the ends of the tendon:- For this purpose, draw

draw it back, and keep it back by
sticking plaister. Apply over it a rag spread with simple cerate.. If it be necessary to apply a splint in order to keep the foot extended, pasteboard is the best. Apply it on the forepart of the leg, and confine it by a roller round the heel. In this way, the wound may be dressed without disturbing the other dressings.—

Lecture 8th. Decem. 13th.— Ulcers— When the granulations of an Ulcer arise as high as the sound parts, they begin to skin over. The thin fluid of a granulating Ulcer should be kept from drying up, by a rag spread with salve made of oil and bees-wax.. Mr. Baynton of Bristol, used plasters to draw the edges of the ulcer together, as near as possible, with great advantage. The hair of the part should be shaved off. The adhesive plaster is

is spread on calico, &c.. Paper is used 1471
at present in the European Hospitals - it
breaks when necessary to let the pus dis=
=charge... This practice of Mr. Baynton is
very good. It assists the granulations to
contract, and makes the cicatrix much
smaller... In forming a cuticle, it is
sometimes useful to sprinkle powdered
rhubarb on the granulations... Dr. P. can
tell whether a patient with an ulcer on
a depending part, as the leg, has walked
or not, by the appearance of the sore.
If he have, the discharge on the sore
will be bloody; - or extravasated blood will
be found in the granulations. Exercise
of this kind must be strictly forbidden.
There are three kinds of Bandage for
the leg - viz. the Laced stocking - Flannel, or
cotton roller, and adhesive plasters -
These

These must be used when the patient 49
cannot be confined in his movements.
When blood is extravasated in the granulations,
they are absorbed. The ulcerative process begins,
and the ulcer increases. Ulcers are often in:
:jured by "dressing them to the bottom", as it is
called;- i.e. cramming lint in them to keep
the sides apart. A gentleman had a fistula
in ano cured by filling it with soft mud,
after cramming it with lint had failed.
In this case, the soft mud suffered it to
get well; which the lint would not do.
The following are the different kinds of
Ulcer, enumerated by Dr. Physick —
1st. Inflamed Ulcer. It is painful - the neigh:
:boring parts are inflamed, &c.. It is to be treated
like local inflammation - viz. by venesection,
purging, bread & milk, or flaxseed meal, poul:
:tices. Keep the ulcer in an elevated position.
2nd.

2nd. Fungous Ulcer - The granulations in [57] this kind of Ulcer become higher than the sound parts - They are sometimes very painful; & at others insensible. Simple pressure on the granulations will often cure, or repress them; And afterwards adhesive plasters. If these will not do, use caustic - or powdered galls, &c. -

3rd. Ulcer in edematous limbs - The granu:lations are purple, painful, &c. - They are sometimes to be treated like inflamed ulcers.

4th. Sloughing Ulcer - Is always attended with pain and febrile symptoms. It is owing to local debility; - for on one leg there will be a sloughing ulcer, and a kindly one on the other. - Use Tonics, and nourishing diet - Ano:dynes pro re nata - fermenting poultices, &c. - It is sometimes necessary to bleed be:fore we give the Bark. If maggots appear, a weak solution of nitric or muriatic acid will

will kill them, and prevent their future appearance. There are Ulcers in weak constitutions which will break out after appearing to do very well. Use powder of oak-galls, &c. — 5th. Ulcer with callous edges. In this case it is sometimes proper to remove the callous edges, with the knife, by pressure, or with, what Dr. P. prefers, Alkaline caustic. It reduces it from the condition of a sore to a simple wound. — 6th. Ulcers attended with carious bone. — The bone should be extracted as soon as loose, especially if on the head. — 7th. Ulcer attended with varicose vein. This occurs near the vena saphena, sometimes. Cured by the Laced stocking, or by Bandages; but the operation for the varicose vein has superceded the necessity of the abovementioned practice. Dr. P. recommends it. —

8th.

❋ For much valuable information concern:
=ing Ulcers, see Underwood, Baynton, & Home.

8th. Ulcer attended with particular diseased action;- as Scrophula, Cancer, Venereal chancre, &c.- In case of venereal chancre with a hard edge, Dr. P. prefers the caustic potash to destroy it.*

Lecture 9th. Decem. 16th.- Fractures.- A Fracture is a solution of continuity in a bone, from external violence. Sometimes from muscular action; as in the patella. Bones are supposed to be more brittle in cold weather than warm; but this is a vulgar error. The reason that there are more fractures in winter is, that the muscles are thrown into greater action in walking over icy, or slippery ground. This is proved by the fact, that a drunken person, or one whose muscles are relaxed, seldom has his bones fractured;- whereas those who make great muscular exertion to prevent falling, seldom escape. Sometimes

Sometimes convulsion is induced by the [57] irritation of the ends of the fractured bone. Fractures are of 3 kinds - viz. Simple, Compound, and Compound-simple. The Simple fracture is when the bone is broken without any wound in the soft parts which communicates ex=-ternally. The Compound fracture is when the fracture of the bone is attended with a laceration of the soft parts, so as to cause an Ulceration, communicating externally. The Compound-simple fracture is when the external opening of a compound frac=-ture can be healed by the first intention; thereby converting it into a simple frac=-ture -- In Simple fracture, the bones th? be put in exact apposition, and retained there by splints. Paste-board is the best. The system is to be kept down by Venesection, purges, low diet, &c. -- Sometimes we are not

not called before inflammation is advanced. In such cases we must use Venesection, purges, poultices of bread & milk with Lead-water, &c. before we attempt reduction. Low diet is almost always necessary. Purging is inconvenient in many cases: If the bowels be kept gently open it will be sufficient. Bandages should not be put on too tight, or mortification will come on, and the fracture become compound. Young bones heal soonest. In the same person some bones unite sooner than others; as the maxilla inferior heals sooner the Tibia, &c. — Sometimes a kind of joint is formed at a fracture. Some Surgeons have cut on to the ends of the bone and sawed them off, with the view of making it like a recent fracture; but this painful operation did not succeed. Dr. P. had such a case in the

* *Vide* Medical Repository, Hexade Volume page for a particular account of this case.

the Pennsylvania Hospital. He passed a seton (61) between the bone (which was the os humeri) and applied splints to keep the arm straight. The seton caused granulations between the ends of the bone, which formed a medium. He withdrew the seton as soon as the arm grew firm. The granulations became callous, and even ossified. The fistula formed by the seton soon healed; and the arm became as strong as the other*. Compound Fracture - opens externally. In simple fracture the living blood from the divided vessels runs into the cavity of the fracture, coagulates, and becomes a bond of Union; - But in Compound fracture the blood is discharged, suppuration comes on, and sometimes the bones exfoliate. Compound fractures differ much from each other. Sometimes there is a simple incision - sometimes a lacerated

lacerated wound. sometimes the bones shattered. sometimes a profuse hemorrhage comes on; here a tourniquet must be applied. pressure made on the inguinal artery, if the hemorrhage be from the leg, & no tourniquet at hand. Meal sprinkled on the ends of the bleeding vessels. an elevated posture of the limb, &c. When the circulation is prevented in a fractured limb, we should amputate, either immediately, or when suppuration comes on. In cases of Hemorrhage from a vessel in a bone, use a cedar plug between the bone and the coats of the vessel. This will stop it effectually. If Mortification be progressing, we should never amputate; the stump will be likely to mortify. A sloughing should be begun. In small compound fractures, we may always attempt an union by the first intention. It often succeeds. Bring the edges together, and apply lint. Sometimes

Sometimes the inflammatory symptoms run high. Then they must be early reduced by co=
=pious venaesection. It has been supposed that the discharge of pus which is to succeed, will weaken the patient sufficiently,- without considering that the quantity of pus depends upon the degree of Inflammation.— After the inflammation has subsided, and pus dis=
=charges freely, Bark, &c. may be given:- and in cases of mortification, &c. where the patient is low, Bark, wine, and cordial diet are very necessary to be given, accord=
=ing to the state of the system.—

Lecture 10th. Decem. 20th.— In cases of Frac=
=ture where the rigidity of the muscles pre=
=vents reduction of the bone, they may be relaxed by venaesection; which may be used, if necessary, usque ad deliquium animi. Drunken Men seldom have their bones broken

broken by falls, &c.— Their muscles are much [67]
relaxed. This renders it probable that the action of the muscles has considerable in=
=fluence in causing fractures.— At the end of 10 days after a simple fracture, the dres=
=sings may be removed in order to examine if the bone be in apposition. If it be not, it may be put so. There is sometimes a backwardness in healing;— here a little exercise on crutches, &c. will stimulate the system to form granulations. Sometimes all this will not do. Then the operation mentioned in last lecture may be tried.— In compound fracture the mode of healing is different. The blood flows out, and the cavity is in=
=flamed. Granulations are formed, which meet, and are converted into callus, and even bone.— When the extremeties of bones die, exfoliation throws of the dead parts.
and

and the flesh in contact with the dead 164
part is stimulated to throw out granu:
:lations, which are converted into callus,
and unite the living ends.— From a
specimen in the possession of Dr. P., it
is evident that the flesh on a dead bone,
may be converted into bone;- or at least,
the granulations thrown out there become
ossified.— If a hemorrhage come on, in the leg
in a compound fracture, which cannot be
commanded, Dr. P. recommends taking
up the femoral artery as in the operation
for popliteal aneurism.— Fracture
of the Os Maxillare inferiora, or Lower Jaw.
This most commonly takes place at the sym:
:physis, or chin;- but it sometimes happens
behind. The coronoid process is seldom frac:
:tured. Dr. P. has seen one case where the
condyle was broken. It is known by pressing
the

the jaw on one side, and working it, &c. [74]
a crepitus is felt. Sometimes teeth are loos:
:ened; especially at the place of fracture —
These should never be extracted; for that
would convert a simple into a com=
:pound fracture. They should be replaced
in their sockets when displaced by the
fracture, and fastened with thread if neces=
:sary. Dr. P. prefers the simple roller to the
four-headed one, in dressing a fractured jaw.
The object in dressing is to keep the lower
jaw pressed against the upper one, which acts
as a splint. In this way the fractured parts
are kept in apposition. The patient
should be fed on spoon-victuals, and for:
:bidden to speak, &c. — It generally heals in
about 2 weeks. — <u>Fracture of the Clavicle.</u>
This happens most frequently about the
middle; or between the middle and sca:
:pular end of it; and is generally oblique.
The

The scapula, by the weight of the arm, and action of the pectoral muscles, is drawn down, and the sternal half of the clavicle appears to be raised;- but it is not so. When it is fractured near, or dislocated at, the acromion process, it is difficult to detect; because the ligaments hold it together. It is also difficult to detect when the clavicle is fractured from within downwards and outwards; as there is no derangement of the fragments. The scapular end, in this case, rests on the sternal portion. The pieces being thus held in their proper place, little is necessary to be done. Dr. P. prefers Desault's method of dressing the fractured Clavicle; which he says is effectual. It is done as follows- A wedge-shaped cushion is placed, the thickest edge up, in the axilla, and confined there by

by a roller passed round it and the body, [75]
once or twice carried over the opposite
shoulder. A sling made with a short band-
age-piece is pinned to this roller which
goes round the body, and the hand is put
in it so that the wrist rests on it. Ano-
ther roller is then passed round the hu-
merus and body, to press in the arm
& thereby extend the clavicle. Then ano-
ther roller round the elbow & shoulder
to bear up the weight of the arm. This
dressing is complete; and should be used;
especially in cases of Ladies, whose clavicles
are more exposed. It generally unites in
about 3 or 4 weeks. The bandages should
be examined every day or two, to see if
they be kept properly tight.

Lecture 14th. Decem. 23rd. — Sometimes
the acromion process is fractured — and sometimes

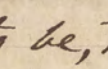
sometimes the scapula itself. In this case the arm must be bent, and raised so that the fractured pieces may come in apposition. In applying the pad, or cushion, the base or thick part of the wedge may be thinner in this case. When we apply the pad in the axilla, we ought examine the pulse afterwards, to see if the artery be compressed. If it be, the pad must be moved farther back, so as to be behind the artery. — Fracture of the Os Humeri - Is generally transverse, but often very oblique. To reduce it - set the patient on a chair. An assistant stands on the opposite side with his hands in the axilla, to counterextend - and another with his hands at the elbow and fore-arm, which is bent on the arm, extends. The ends of the bone are then put in apposition by the surgeon. A roller dipped in

in oil & vinegar, or something of the kind, [79]
is applied round the arm pretty tightly
with the design of compressing the muscles,
to prevent their action. In applying it,
begin at the elbow and roll upwards. The
roller should be long, and when rolled up
high enough, apply 4 splints, and then
roll down again on the splints. Bend
the arm, - put it close to the body - and
keep it so by a broad bandage carried round
it and the body: - Carry it a little over the
elbow joint, in order to support the arm. -
Sometimes the humerus is fractured at the
head. It is often to be known by the patient
being sensible of a snap at the time: again,
the arm may be moved in every direction;
but it gives a severe pricking pain. Some-
times the lower end of the bone is pushed
in, or out. - Sometimes there is no displace-
ment: Here it is difficult to ascertain; But
by

by grasping the arm with the left hand (at) near the axilla, & with the right hand at the elbow, (the body being fixed) by push:ing horizontally backwards and forwards, a crepitation is felt.. Sometimes there is so great an ecchymosis that no bone can be felt; but here a crepitus is gen:erally to be felt. We should be particular to distinguish a fracture at the head of the humerus from a dislocation. It has been mistaken for a luxation; but if we examine, we will find in cases of luxation, a cavity immediately below the acromion process, - and there will be no crepitus, nor pricking pain, &c. - To reduce this fracture, proceed as in the last case, and apply a roller up to the scapula - then that wedge-shaped cush:ion is to be applied, - it need not be quite

quite so thick as in the last case; and
if the lower fragment be thrown in, the thickest edge of the cushion may be up, & vice versa. Confine the wedge much as in the case of fractured clavicle. Then apply 2 splints, one on the inside, the other on the outside, high up. Assistants all the time extending. Turn the roller over the splints, as in the last case. Then bring the arm to the body. Make a sling for the arm with a piece of roller. and apply the broad bandage round the humerus and body. If the lower fragment be bent in, the broad bandage should press most on the elbow, but if it project outwds the bandage should press higher up. In 10 days the arm may be examined, and if any how misplaced, it may be still reduced, and it will do as well as before. It unites completely in about 4 weeks.

Sometimes

* When the arm is nearly half bent, as it ought to be, the splints to be applied must be of this shape  to go above and below the arm. Those used by Dr. P. are made of <u>pasteboard</u>.

Sometimes the humerus is fractured at the
Condyles - sometimes they are split apart - sometimes one broken off - &c. This accident occurs most frequently in children. The soft parts swell immediately. The arm bends in every direction. A crepitus may be felt. It is difficult to say how it is done. The olecranon process has been known to slip up in the fissure and unite there, causing a stiff arm. To reduce it, - extend the arm, and get the parts in their natural situation - apply a roller, - beginning just below the elbow, and continuing it a space above; keeping the arm half bent. Apply two of the proper shaped splints * on each con: :dyle - and two bent pieces to go before & behind, [they adapt readily if wet in warm water] and then carry down the roller on the splints. Put some cushion be: :tween the arm & body, to keep the arm off. The fracture should be examined in

15 or 20 days - always sooner in children; and the joint moved a little, or it will be stiff for some time, and perhaps always. Dr. P. had a case where the only deformity was an angle downwards, of the forearm on the arm; instead of upwards, which is the natural direction of it.

Lecture 12th. Decem. 27th. - Fracture of the Bones of the forearm. Sometimes both bones are broken together: then the arm may be bent at the fractured part. Often the radius is only broken: then by rotating the hand a crepitus is felt. To reduce it - One assistant holds the arm by the elbow - and another takes hold of the hand as if shaking hands. Extend, and apply a roller from below, upwards - not so tight as

as to press the ends of the fractured bone [89]
towards the other. Next apply 2 stiff splints
so long as to reach from the elbow to, or
past the fingers ends. keep the thumb
up, and bring the roller down on the
splints. Bring it to the body, and support
it in a sling. It will be well in 20 days,
or 3 weeks. This treatment will do for
either bone.. When the olecranon is
broken, the fracture communicates
with the cavity of the joint. The patient
will hold his arm part bent. The way
to bring and keep the fragments together,
is to extend the arm. Apply a roller from
just above the wrist, upwards over the
elbow joint, nearly to the shoulder. If
the skin wrinkle on the elbow joint, extern-
-ally, draw it up. Apply a long splint
on the inside of the arm to keep it
straight. Examine the arm, and bend
the

the joint, in 15 or 16 days; otherwise it [94]
may get stiff. It will be well in 3 or 4
weeks. — Fracture of the Ribs. Some-
times one, or more are broken. It is at-
tended with some pain, sudden and
sharp, in breathing. Sometimes there is
a spitting of blood. All that can be
done is to apply a broad bandage round
the body - to use low diet, bleeding, - and,
if a cough attend, mucilaginous drinks,
&c. — In a Fracture of the Sternum -
the same method of treatment is to
be pursued. — Fracture of the Os Femoris -
This most commonly takes place a-
bout two-thirds of the way down - some-
times just above the condyles. The leg
generally becomes an inch or two short-
er, owing to the action of the muscles
drawing the ends of the bone past each
other.

ther. The leg appears a little larger at [93]
the place in consequence. When the ends
are much past each other no grating
is felt until some extension be made.
Mr Pott recommends to bend the leg on
the thigh, and the thigh on the pelvis.
This is hard to be kept to. As to the ex-
tension of the muscles, Dr. P. does not mind
it, - as the muscles will accommodate them-
selves to any state. Some recommend to
lash one leg to the other to keep it extended.
Others, to hang weights to the foot, over the
end of the bed. Neither of those methods
do well. Desault's method is the best.
The patient should be laid on a matrass,
on boards. A feather-bed gives way too much.
Be provided with rollers - 2 long bags of chaff,
or flannel folded so as to be as long as the
leg - A long splint to extend from the
axilla

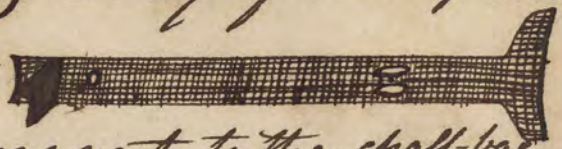
axilla 8 inches below the foot for the 195
outside - and a shorter one for the inside,
to reach from the perineum below the
foot - 2 short splints to go before and
behind, on the thigh - Have sticking plaster,
a silk handkerchief, &c. ready. - When the
patient is extended on his back, an assist-
ant takes hold at the axilla, and ano-
ther at the foot - They extend, while the
surgeon puts the bones in apposition.
Observe if his legs be of the same length, -
and, at the same time, if the patient
exactly straight; or we may be deceived
with respect to the length of the leg. Then
apply a roller from the knee up, not
very tight: next apply the long splints,
with the chaff bags, or flannel, between
them and the legs - and also apply the
short splints before and behind. Fasten
these

these with tape strings, 3 in the space of the short splints round the thigh, and one below the knee;- But before this is applied, a roller of russia sheeting, or a silk handkerchief, should be passed round the ankle, crossed on the instep, & tied on the soal of the foot. To prevent excoriation on the tendo achilles & instep by this roller, apply a sticking plaster under it. With the same view, of preventing excoriation, there should also be sticking plaster applied on the perineum, and a compress laid on it, under the bandage when applied. A bandage is next applied round the pelvis and longest splint. A silk handkerchief is passed from near the upper end of the long outside splint to the upper end of the long inside one, and fastened there.

The

The bandage which was tied on the [99]
soal of the foot, is now to be tied round
the lower end, and through a hole near
the end of the long outside splint, to
draw down the thigh. If it be as long
as the sound leg, we may know it is
right;- and if it be not, as is often the
case, the continual stretch of bandage
at the ankle will bring it so; and it
should be tightened as often as it gets
slack.- There is a bandage goes round
the well thigh, in the groin & perineum,
and is fastened to the bandage which
goes round the pelvis, in order to keep
it in its place.- The leg all this while
of dressing is to be kept extended by the
assistants. It is usual to put a com-
-press in the axilla, to prevent the
upper end of the longest splint
from injuring it.- The longest, or outside

outside splint is nearly of the shape (104) here represented.



The side which goes next to the chaff-bag, or flannel, is here seen, or represented, in order to show a little block which was added in order to keep the leg from roll-ing, and also to pass one end of the bandage over, in the notch, whereby the leg is drawn straight instead of being pressed against the splint. When this dressing is on, the body is all stiff. There is no motion at the hip. The patient does not derange his dressings on moving to the bed-pan, &c.

Lecture 13th. Decem. 30th. — The thigh-bone is fractured sometimes at its neck, though seldom. There is great dif-ficulty in reducing it sometimes.

It is necessary in these cases often to
bleed ad deliquium animi, or nearly. The
dressing of Desault, as mentioned and
described in last Lecture, is best. We should
see it every day, and examine if it be as
long as the other leg:- If not, it is wrong.
In 50 or 60 days it will unite. The Os
Femoris is sometimes fractured at the
Condyles. Here the treatment is nearly
as before. There ought to be a compress
to keep the condyles together. — Frac-
-ture of the Leg. Both bones are sometimes
broken; but often only one. The fracture
of the Tibia is easily told; being thinly covered.
To reduce this fracture. - Have a box with-
-out end boards, with a pillow in it, &
the many-tailed Bandage laid on the
pillow in proper order for applying
round the leg. It is best to have the
Bandage

bandage in separate pieces. Lay the [105] leg on, making the proper extension, and wrap on the tails of the bandage, beginning at the lower end. Let the tails lap a little, - and do not wrap them too tight, - for the same reasons as in dressing the fore-arm. Now ap:: ply the splints, one on each side, interposing a fold or two of flannel. Fasten them by 3 tape strings. And end-board may be put in the bog now, high enough to keep off the weight of the bed-clothes. The end-board is loose, and is fixed in the right position by two tape strings. The foot is kept in an upright posture by a bandage round it and through two slits in the foot-board; one on each side of the foot, close to it. —

When

When the fracture of the Tibia is very ob-
-lique, or when it is broken in several pla-
-ces,- fasten two tapes on each side of the knee,
just below it, with a bandage round like
a garter - Another bandage is to be crossed on
the instep, and tied on the soal of the foot.
Long splints, one on each side of the leg,
are now applied, to extend below the
foot. The tapes below the knee are fasten-
-ed in the upper ends of the splints thro'
holes - and the bandage at the foot is
passed round a cross-bar in the splints
below the foot, and drawn as tight as
necessary. It should be premised, that
the many-tailed bandage is to be on be-
-fore the splints are applied. This dres-
-sing is convenient in cases of com-
-pound fracture, for the extension
is kept up while we are dressing the wound.

Fracture

Fracture of the Patella. It is generally [109] transverse; but sometimes longitudinal, and occasionally oblique. The leg is to be kept straight, and the thigh bent on the pelvis a little, in an angle of 30 or 40 degrees. Lay a compress on the thigh just above the upper fragment;- pass a bandage round below the knee like a garter 3 or 4 times, and then carry it round above the knee over the compress a few times, in the form of an 8 over the joint;- and then wrap it over the patella itself, to prevent swelling of that space, and continue the roller up the thigh in order to compress the muscles. Then apply a long splint from the Ischium past the heel, on the under side of the leg, to keep it extended. Make a hole in the splint for the heel to rest in.

rest in. Then apply a bandage round (144)
the leg and splint to confine it on. In
some cases of transverse fracture the patella
is drawn up 2 or 3 inches, and remains so;
the patient has a stiffish knee, but if he
will persevere in using it by degrees, a
kind of ligament which is formed will
allow of motion. Let him sit on a table
and swing, or kick out his leg, gradually
increasing the degree of motion.

Lecture 14th. January 3rd. 1804.

Luxations. In recent luxations, where
the rigidity of the muscles oppose the reduc-
tion, venæsection ad deliquium animi will
greatly facilitate it. But in cases of long
standing, new adhesions are formed, and these
are the principal obstructions. They are to be
overcome by mechanical force, of pulleys,
and

and ropes, and other suitable apparatus. /113/
The operation of these may however be af=
=sisted by venæsection, warm-bath, &c.- In recent
cases of luxation where such copious vena=
=section will not be submitted to, by the
patient, Dr. P. thinks he would try emetics,
or nauseants, and reduce during the
relaxation which they occasion - or he
would try clysters of the Infusion of
Tobacco.- The Lower Jaw is often luxated.
most commonly by gaping too wide. The
mouth remains wide open. The reduction
is simple and easy - Wrap linen, or some
such defence, round the thumbs, and
introduce them into the mouth - The fing=
=ers applied on the outside. Press first down,
and then backwards.- Sometimes in partial
luxations, it is reduced by a "chuck under
the chin".- Dr. P. relates a case of a tem=
=pestuous Wife, who luxated her inferior
mandible by opening her mouth very
wide

wide in order to vociferate more effec:- /115/
:tually at her good man, whom she was
reprimanding!— The Clavicle is sometimes
luxated at the acromion process. The arm
drops down, and draws the scapula with it.
The reduction is easy—but it is difficult
to keep it so. Desault's dressing for the frac:
:tured clavicle is best for that purpose.
Luxations of the Os Humeri are the
most frequent of any. It is commonly
thrown into the axilla. In this case, the
round head may be easily felt there. It
is often drawn under the pectoral muscle,
where it may be readily felt. Dr. P. has
seen it luxated obliquely forwards and
upwards.— In the two first cases there is a
preternatural cavity just before the acro=
=mion process. The patient cannot raise his
arm. The elbow is held a small distance
from

from the body. In recent cases the [117] reduction is generally easy. — Two towels, or broad strips of strong linen, are fastened (by their middles) on the arm just above the elbow by a roller. and the ends of the towels are tied together in order to make 2 nooses, or holds, for the assistants to extend by. Counter-extension is made by another assistant on the acromion process by mean of a strong strap, so soft as not to excoriate much. In old cases where much force is required, the patients body is held by a broad strong bandage. The counterextension at the acromion process is of much importance; for the scapula will otherwise be pulled along by the extension. We see in the case of the Miller, related by Cheselden, that the arm even pulled the scapula from

from the body, sooner than be divided at the joint. The fore-arm is bent on the arm when the extension is made, and if there be much difficulty, the surgeon half-rotates the os humeri by it. In old cases where the humerus has been out for 3, 4, or more weeks, and adhesions have formed, much force is required. The pulleys, &c. must then be used. The broad jacket-bandage must be used to counterextend the body. When the extension is sufficient, the head of the humerus must be drawn up towards the glenoid cavity. The patient is apt to move his body and derange the extending apparatus; especially that which counter-extends the scapula. Dr. P. thinks, if he try it again, he will confine the patient on a table, so that he cannot move his

his body so much. Dr. P. has succeeded /121/
in some cases of 6 or 8 weeks standing
but he has failed in 2 or 3 cases. However,
in some in which he did not quite
succeed, the patient recovered much of
the motion of the arm from what change
he did accomplish. Dr. P. has seen a recent
case of luxated humerus, which had
baffled several attempts to reduce it, in
consequence of the action of the muscles,
reduced with great ease upon using
venæsection ad deliquium animi.
The reduction was made during the
deliquium. — The Bones of the Fore-arm
are sometimes luxated. The olecranon
process is in some cases higher up than
natural. The arm is generally half
bent. Sometimes those bones are dis-
-located sideways. — To reduce — One
Assistant

assistant takes hold with both hands [423]
of the patient's hand and wrist - another,
of the arm just above the elbow - and
the Surgeon takes hold of the arm just be-
low the elbow. They all make an extension,
(the arm being part bent) and when it is
sufficient, the assistant is told bend the
forearm on the arm further, and
the coronoid process goes into its proper
place. — Luxation of the Os Femoris. It
is said this most commonly takes place
inwards and downwards: - But Dr. P. has
seen 7 cases, - and but one was in this
way. The other 6 were upwards and
backwards, or outwards. It is sometimes,
though seldom, luxated upwards and
inwards over the pubis. Luxation is
said to be much more seldom than
fracture of the neck of the bone; but
Dr. P.

Dr. P. never saw but one case of fracture, /425/
and, as before mentioned, has seen 7 of luxa:
:tion. When the thigh is luxated upwards &
outwards, the foot is turned inwards. When
the head of the femur is thrown into the
foramen thyroideum the position of the
foot is not much changed, - nor indeed
is the length of the leg much affected in
this case: - But in the other, it is shorter
than the sound leg. The knee is generally
a little bent. Where there is any doubt
about the length of the leg, the patient
is to be laid flat on his back, - and we
must take care & observe that he do
not distort his pelvis while we are
measuring; for they are very apt do it to
ease the muscles. - To reduce it - The
patient is laid on his back - A firm strap
or

or bandage is passed between his thighs, [427]
near the perineum, and both ends of it
drawn by an assistant to the side of his
body on which the luxation is. Two tow-
-els are fixed just above the knee in the
same manner as in the case of dislocated
Humerus, for another assistant to draw
by. A broad strong bandage is passed round
the patient's pelvis, on the ilia, and
fastened to the table, to confine it. A
bandage is tied very loosely round the
patient's luxated thigh, in which the
Surgeon puts his neck so as to have
it on his shoulder, in order to draw
the head of the bone to its right place
by it. This large noose, or loose bandage
is used when the os femoris is dis-
-located downwards. The extension is
now made strongly, - and, if necessary,
the

the Surgeon half rotates the thigh by [129]
mean of the bent leg, which serves
somewhat like the handle of a windlass.
In some cases of violent contusion on
the hip it is difficult to distinguish it
from luxation. The legs will appear
of unequal lengths owing to the distortion
of the pelvis. We must use the method
abovementioned of seeing if the pelvis
be straight by examining the spinous
processes of the ilium, &c. If muscular
rigidity oppose the reduction in recent
cases, venaesection ad deliquium animi
must be used, as in the other
cases. Dr. P. was the first who
used that practice in the Pennsyl:
:vania Hospital. He learned it
of Doctor Monro.

* In Bruises of the scalp, a poultice is the best thing to apply to it.—

Lecture 15th. January 10th. — Injuries (131)
of the Head by external violence — Int.
of the Scalp — They have often at first a
trifling appearance, but are often serious
in their consequences. First — Simple
Contusion — The vessels below it are rup:
=tured, and a soft pappy tumor is felt.
The Surgeon would think, from feeling
it, that the skull was broken; but if
he cut on it, he will find it sound.
The scalp should never be cut thro'
unless symptoms of compressed
Brain occur; for the head will be very
sore, and perhaps a piece of the bone
exfoliate*. — Second — Simple Incision —
Here the lips are to be kept together
by adhesive plaster. In cases of La:
=ceration of the scalp, the sides should
be

be brought as near as possible - fragments /133/
of scalp should never be cut off. Stitches should
not be used; for the scalp will swell, and
the ligatures will be drawn tight; - At least
it should not be stitched until inflam:
:mation subsides. Adhesive plaister is better.
Third - punctured wounds are apt to
induce inflammation in the scalp. The
common antiphlogistic treatment is
most proper. A director should be intro:
:duced into the puncture, and the part
dilated freely by the knife. This will remove
all the symptoms of vident pain, vo:
:miting, &c. immediately. A gentleman
was treated in this way successfully, after Ve:
:nesection, &c. had been used to no purpose.
But next day he had as bad a pain on the
other side of the head where no injury had
been sustained; - This was opened, or dilated
in the same way, & the patient began from that

that time to get well. 2nd. Injuries of the Brain by compression. This are of two kinds. either the bone is fractured and depressed; which discovers itself by the symp: toms immediately; Or there is a rupture of the Bloodvessels within the skull, in the ventricles, or under, or over the dura mater, &c. This does not discover itself so soon; not until the blood accumulates so as to press the brain. Sometimes both fracture and rupture occur at once. The Trephine is to be applied in these cases. Sometimes the skull is fractured without a compression of the Brain being produced; Here it has been doubted whe: ther the Surgeon should apply the Trephine. When there is an opening through the scalp, i.e. a compound fracture of the skull, and depression, whether symptoms of

Compression

compression occur or not, we ought /137/ to raise it:- But in simple fracture of the skull, whether there be depression or not, if there be no symptom of compression, we ought not to operate;- but should use antiphlogistic remedies.

3rd. Injuries which cause Inflammation of the Brain - The symptoms here do not commonly come on immediately; and sometimes not for several days. It occurs with restlessness, pain in the head, &c. - It is attended, first, by simple contusion of the scalp, - here it feels pappy, as formerly mentioned; pus is formed on the skull, &c. - Second, by fracture of the skull, without depression; - In this case, the Inflammation is to be reduced by venaesection usque ad deliquium animi; and

and sometimes a blister on the shaved (139) scalp, purging, low diet, &c. - If these will not do, and rigors come on, a perforation should be immediately made. If the suppuration have taken place on the external surface of the dura mater, it will be discharged, and the patient may recover; - But if it be within the dura mater, the chance, from any treatment, is much against recovery. Pus is discovered between the dura and pia mater by the dura mater rising up convex in the perforation: If there be no fluid between them, the dura mater will lay flat. It has been recommended to puncture the dura mater; but Dr. P. has seen it done 7 times, and always without success. He has seen one case of fluid between the dura & pia mater

cured

cured by copious bleeding, purging, &c. (141)
and would prefer this practice to any
other.— 4th. Commotion, or Concussion
of the Brain — is much like depression
in its symptoms, — and is to be treat:
:ed like it, by venasection, purges, &c.
Dr. P. does not approve of searching a:
:bout, & perforating, to find the injury.—

Lecture 16th. Jany. 13th.— Trepanning
is required in cases of Fracture of the skull
attended with compression — in cases of
extravasation of blood — of collection of pus,
&c. within the skull.— Sometimes palsy
of the limbs, &c. is caused by the depressed
skull. A man had a palsy of the organs
of speech from a depression, and yet
retained his senses.— In cases of commotion,
the use of Mercury in addition to the
antiphlogistic

antiphlogistic plan, is very good, - so
as to induce a salivation. - The first
thing to be done when a Surgeon is called
where it is necessary to trepan, is to have
the head shaved; The fracture may general:
:ly be then ascertained. The operation may,
and should be performed on any part
of the skull, if necessary. An incision
should be made the length of the fracture,
unless it extend to the basis of the skull;
beginning on a sound part, and proceed=
:ing very cautiously. The pericranium is
taken off by the raspatory. The centre-pin
of the Trephine should be applied as
near to the fissure as possible to be safe,
in order to take in as much of the frac:
:tured bone as possible. A moveable cen=
:tre-pin is best, which slips up in the handle,

handle; and it should be gradually 145
slipt up, for fear of perforating or in=
=juring the dura mater. We should ex=
=amine with a tooth-pick pretty often
to see if we have perforated the skull
in any part; as it is often very uneven.
If the Trephine be through in any part,
we should endeavor to prize it out
with an elevator, - for if we keep saw=
=ing until the bone be quite loose, we
shall be very apt to wound the dura
mater; which, as far as Dr. P. has seen,
is always fatal. It is much better to
use some force in breaking it out.
The Lenticula is of little use, - Dr. P. breaks
off the sharp fragments of bone (for which
the Lenticula was used) with the elevator.
If necessary, the Trephine must be ap=
=plied again, as near the fissure as a=
=bovementioned.

abovementioned. If there be effusion, or [147] pus, between the skull and dura mater near the perforation, but not commu=nicating with the opening, a spatula may be run between them, and the matter discharged. If the perforation be made over the sinuses, and they be wounded, a piece of lint applied to it is the best.— A poultice of bread and milk should be applied over the wound, first bringing the edges of the scalp pretty near together by sticking plaster;— Using at the same time, venæsection, purging, low diet, &c.—

Inflammation of the Eyes.— Sometimes comes on suddenly in the night,— but more commonly in a gradual manner. It is treated by venæsection, cupping, scarifica=tion, mercurial purges, &c.— There is a disease of the Eyelids something like

Tinea capitis

Tinea capitis. Unguentum citrinum [149] is good for it;- but what Dr. P. prefers, is the Tar-ointment,- he has found it very good.- Inflammation of the Tunica Conjunctiva.- Its remote causes are violence, sand, acid substances, too much use of the eyes, cold, too much light, &c.- Sometimes the adnata, between the cornea and internal canthus, is thickened,- producing the disorder called Unguis.- Inflammation of the substance of the Eye.- When seated in the posterior chamber of the eye, it is more violent than when in the anterior chamber. It has caused death.- When the cilia, or lashes, are turned in, it is called Trichiasis. Sometimes they grow wrong- They may be cut off, and, St. Ives says, prevented from

from growing again by applying
Lapis Infernalis, or nitrate of Silver. Inflam:
:mation of the eye is to be treated by
venæsection.- When this is carried as far
as the system will bear, local bleeding
is to be used- cupping on the temples,
scarifying the vessels on the sclerotica,
&c.- Poultices are often too heavy to be
borne. Infusion of the pith of Sassafras
is a good mild wash. Dr. Rush's anti:
:monial powder is very good- Mercurial
purges- Blisters. The following eye-
-water is good- Sacch. Saturn. Vitriol.
Album. Laudanum & water, q. sufficit.
Some recommend, when these fail,
to drop Laudanum in the eye. When
suppuration takes place in the anterior
chamber of the eye, it may be let out,
but not too soon,- for sometimes an
antiphlogistic

antiphlogistic treatment will oc-
casion an absorption. The Unguis
is to be taken off by the knife. (153)

Lecture 17th. Jany 17th. — Fistula
Lachrymalis. Sometimes there is a
stricture of the ductus ad nasi. The duct
above it swells with tears. They may be
pushed back by pressure; and if the pres-
sure be pretty hard, purulent matter is
pushed out from the duct. If the eyelids
glue together, a mild ointment rubbed be-
tween them in the evening, will prevent
it. Sometimes the lachrymal sac itself
is inflamed, and if not checked by anti-
phlogistic means, it suppurates & opens
externally. If it be opened with a knife, the
eschar is not so great as if opened naturally.
When opened, we can readily examine
the duct. If we can open the duct by a
bougie

bougie the patient is relieved;- but it is /155/
sometimes quite impervious. In this case
an opening is to be made through the os Un:
:guis.- To perform the operation- make an
oblique incision below, or within the tendon
of the orbicularis muscle; beginning just within
the internal canthus, and extending the in:
:cision downwards and outwards about
3/4 of an inch- pass a probe through the duct,
if practicable, into the nose- prepare a
small bougie to introduce into the place
of the probe; and leave it in 3 or 4 hours
at a time,- Or, what is better, introduce
a little instrument invented by Mr. Weir
and it may be left there constantly. Its
head may be made black by heating
it and giving it a thin coat of black wax.
It then looks like a black patch by the
side of the nose. Bring the edges of the wound

* When a <u>round piece</u> is cut out of the os unguis, the external wound may be allowed to heal <u>immediately</u> - which is not the case when it has been perforated with a <u>probe</u>. A bougie must then be worn until there is no danger of the perforation closing up. ——

wound together, and keep them so by [157]
adhesive plaster. We may know when
the stricture is passed by a drop or two of
blood coming down the nose. - If a probe
cannot be passed through the duct, a
piece must be taken out of the os unguis.
A piece of horn is introduced up the nose
to cut upon. A little cutting instrument
which takes out a round piece like a
trepan, is used in this operation. When
the piece is taken out, bring the edges
of the wound together with adhesive plas=
=ter. Keep the hole open by a bougie,
worn for several months, until it be=
=come fistulous.* — Cataract - This dis=
=order consists in an opacity of the chrys=
talline lens, or its capsule - It is caused
by violence, inflammation, and sometimes
comes on without apparent cause. The
patient gradually becomes blind - Objects
first

first appear misty-barred-spotted, &c. /159/
A variety of medicines have been recommend:
=ed to discuss it. Mercury stands at the head
of the list. But they do not often do much
good. The operation alone can be relied on.
Couching is the most ancient operation
for this disorder; but extraction is now
preferred, perhaps because it causes least
pain. It is also much more perfect and
complete. When the lens is fluid it can:
=not be depressed; and when the capsule
is opaque, depressing the lens does no good,
and sometimes after depression it rises
again, and comes before the pupil; especi:
=ally in stooping, and Dr. P. has seen a
case where the lens had adhered to the
iris, and in depressing it the iris was
torn. He prefers Extracting to couch:
=ing. He has extracted so nicely that
no

no cicatrix could be discovered after= (164)
=wards. If the operator cut clear out at one cut, there will be much less of a cicatrix. Sometimes the Iris floats in the way of the knife. It may be readily re=
=moved by pressing the finger of the other hand on the cornea and gently rubbing it. The iris is sometimes a little wounded; but it does not materially affect vision. The vitreous humor is never wounded nor injured, unless by extreme awk=
=wardness of the operator. If Inflammation occur, it must be treated with copious antiphlogistic remedies.

Lecture 10th. Jany. 20th. — (This Lecture is nearly a repetition of the last; with some ad=
=ditional observations.) A variety of Med=
=icines have been recommended in Cataract, of which Mercury is to be preferred;

preferred; But Dr. P. has seen several cases (163)
in which it did no good. Dr. P. prefers ex=
=tracting the lens; for it is less painful, and
the lens is often as fluid as Jelly - And the
capsule, which is sometimes opake, can:
=not be detached often from the adjoining
parts, in couching. It may indeed be
detached, or torn in several parts; but it
will resume its place afterwards, - And the
Iris has been torn down in depressing.
It has been urged that the Iris is in
danger of being wounded in extracting;
but it is not the case if done expertly:
And if it float in the way, rub the cor:
=nea gently and it will disengage it from
before the knife. If the cornea be opaque,
the operation can do but little good. If
the patient have a pain of the head,
it is not so agreeable; for it is some=
=times

sometimes increased afterwards. It is 165
favorable to see the iris contract and
dilate with variations of light;-but it is
not a certain rule. When the patient
cannot distinguish daylight from darkness,
nor a window in a room, the retina is
probably not in a sound state. A paraly:
:sis of the optic nerve is to be suspected;
and the operation should not be per:
:formed:- But Dr. P. has been deceived when
a patient could distinguish day from
night, &c., for the operation sometimes
did not succeed in them. It is desira:
:ble that the patient should not have a
cough, nor be subject to sneezing,-for
it fills the vessels of the head, and en:
:dangers the eye. The cough should be first
cured. Dr. P. knew a patient who could
prevent sneezing by pressing on the upper
lip.

lip pretty hard. The patient should [167]
be confined to low vegetable diet. venaesection
should be used, if necessary, to keep down
the inflammation - and a blister behind
the neck. The most proper <u>season</u> for
operating, is the moderate, steady wea-
-ther of <u>spring</u> and <u>autumn</u>. The best
knife, is that recommended by the
<u>Baron Wenzel</u>. The next instrument
is a crooked pointed needle, to pull away
the chrystalline lens; which has a small
scoop on the other end of its handle
to pull or scoop away any remaining
portion of lens. A small forceps is necess-
-sary; - And when we first extract the
opaque capsule, a small hook; - and a
small pair of scissors where it is ne-
-cessary to dilate the opening; but the
use of them should be avoided if possible;
for

for they cause a cicatrix. A Speculum [169] was formerly used. Dr. P. never saw one used but once; and then it irritated so much that the operation could not be performed at that time. It occupies one hand of the Surgeon, also, which is a disadvantage. A spear with a cross-bar, to keep it from going in too far, was once used; but it is useless. The best reason for not using those instruments is, that they are not necessary. Keeping the eyelids open a while, and applying slight pressure, will cause the eye to remain motionless. The patient is to be seated on a low chair, with his eye obliquely to the window. A bandage round his head, with a folded piece, hanging over each eye, pinned to it.

The

The fold over the eye to be operated 1471
on is pinned up when the Surgeon pro-
ceeds to operate. An assistant should
stand behind the patient, with the
head of the latter on his breast, or against
it, and press up the eyelid against
the superciliary ridge, - making moderate
pressure on the eye. The Surgeon seated
before the patient, presses down the
lower eyelid, and also makes a gentle pres-
sure on the eye. This being continued a
little while, the eye becomes perfectly
still, and this is the moment to operate.
When the Surgeon operates on the left eye
he should have a stool to put his right
foot on, - so that he may rest his elbow
on his knee - & vice versa with respect to
the other eye. This gives his hand much
more steadiness. Being thus prepared, at

at the proper moment, pass the knife /173/
through the cornea (the longest sharp edge
downwards,) and carry it to the far side
and out at the inner edge of the cornea.
Pass on the knife and it will cut out,-
making a semilunar incision. Then take
the little hook, and introduce it through the
pupil, and tear, and loosen the capsule,
so that the forepart of it will come away.
Then use gentle pressure on the eye
so as to push out the lens; but not so great
as to protrude the vitreous humor;- though
Dr. P. has seen small portions of it come
away without much disadvantage. If the
capsule be opaque, it must be all brought
away with a little forceps. Sometimes it will
come away whole. All the fragments
of lens, if any remain, must be brought
away with the small scoop. Sometimes
these

these fragments are not evident at first, [175]
but by gentle rubbing pressure over the
eye they will appear. Some Surgeons are
so expert as to cut the capsule of the lens
with the point of the knife before they
carry it out at the other side. This is ex=
=peditious;- but by not doing it we have
an advantage,- which is, when the capsule
is opaque, we can take away all the
fore part of it with the hook - whereas
in the other method it is only divided.
When the operation is finished, we should
let down the little fold of linen - and apply
the dressing; which is a compress laid lightly
on the eye, and a bandage passed round
the head, with a nightcap over all. In=
=flammation is to be anxiously avoided,
by venaesection, purges, - blister to the back
of the neck, low diet of spoon victuals, &c.
Just

put the patient to bed in a dark room, (177) and secure his to the bedsteads by means of tapes, in order to prevent him from rubbing his eye, which he may do in his sleep. The patient is confined on his back in this way for about 2 weeks, and takes his drink, &c. as he lays, out of the spout of a tea-pot. The operation will often succeed by this treatment;- But Dr. P. has had a case where the inflamma:=tion of the eye, and consequent blindness, could not be prevented. In such cases, however, the Surgeon must use Anti:=phlogistic remedies freely. ———

Lecture 19th. Jany. 24th. — There is another disease of the eye in which the pupil is closed, by inflammation in the An:=terior chamber of the eye, from various causes. The

The sphincter iridis is in this case [479]
closed intirely, so that no light can be
transmitted. The operation is simple.
A knife is passed as in extracting the
lens, until it come to the edge of where
the pupil was, it is then passed through
the iris and carried to where the other
edge should be, and then carried out, &
passed through the cornea, as in extract=
=ing the lens. By this process a semilunar
incision is made in the iris similar
to that in the cornea. The iris will
sometimes retract so, upon this, as
to form nearly a circle; but if it do
not, the flap in the iris may be cut
off, either with scissars, or with an in=
=strument for that purpose, invented
by Sir James Earle. Where there is
also an opacity of the cornea attend=
=ing

attending this closing of the pupil, (184)
if there be a transparent part in any
portion of the cornea, the artificial pupil
should be made opposite to this part.
Use antiphlogistic regimen, &c. as in case
of extracted lens. — **Polypi of the Nose** —
are of 2 kinds - One is a soft, tender kind,
red, and apt to degenerate into cancer.
The other is of a palish red, and is not
so tender - it is larger in wet weather
than dry - and may be extracted with=
out any disagreeable consequences. There
are 2 modes of extracting polypus - One
by tearing it out with forceps. If it have
a narrow base, this may be readily done, &
the part will suppurate, and there will
be no renewal of the polypus. The other
mode is by passing a ligature of wire
or thread round it with a probe, and keeping
it

it drawn through a canula. This operation [103]
is much easier described than performed.
After this last operation, there is generally
a little of the polypus left, and it is removed.
Polypi are generally attached to the os
turbinata inferiora, and in this case,
the remnant of polypus may be destroyed
by caustic alkali. The basis of it may be
discovered before the operation by passing
a probe about it. But the polypus is
sometimes seated far back: here it may
be seen in the mouth beyond the soft
palate. It is to be extracted with the forceps.
Dr. P. prefers extraction with the forceps
where it can be done; because, for the
reason mentioned above, it does not re-
-new so readily. — Schirrous Tonsils —
Were formerly taken off with crooked scis-
-sars; but of late, they are removed by
ligature. This latter mode is very pain-
-ful, and Dr. P. thinks cutting them off with

with scissors is preferable,- because from
some observations of his, they did not
bleed much;- and if they did, it could
be checked by actual cautery. Destroying
them by caustic is inconvenient &
dangerous. — Hare-lip - is often conge:
:nial; but sometimes is caused by accident.
In this latter case, it is to be treated like other
simple wounds,- stitched with the twisted, or in:
:terrupted suture. When congenial, the division
some-times extends through the palate process
of the superior maxillary bone, and injures
the voice and deglutition. It is to be converted
into a simple wound, by cutting or pairing
off the sides,- taking care to cut out the upper
angle completely, so that it may unite there.
Use the twisted suture; and lay a little lint
spread with cerate on it. Feed the patient
on spoon-meat. In children, the operation
should

should be performed at two months old; or [187]
as soon after as convenient. If the patient
have a cough, the operation should not be
performed until it gets well; as it might
derange the wound.

Lecture 20th. Jany 27th. — Schirri — A
schirrus is a circumscribed tumor, hard, &
not red nor inflamed. A schirrous tumor
will often remain stationary many years.
Dr. P. has known a schirrous tumor, of the
size of an egg, to remain so 20 years, then
inflame, and ulcerate in a week, becoming
a dreadful cancer, — and kill the patient in
another week. — A cancer is an ulcerated
schirrus. — Sometimes schirri remain in-
dolent for a long time, — and then be affected
with a pricking pain, — inflame, and ulcerate.
A schirrus always enlarges before it ulcerates.
Schirri are most apt to ulcerate in women
about

about the period of the cessation of the menses. [109]
Schirri are often the effect of blows, and other vi:
:olence, on glandular parts. Where inflammation
and fever succeed violence on the breasts, and
other glandular parts, we may hope for a sup:
:puration, and cure, in that way, - or by an:
:tiphlogistic means we may perhaps discuss
it. But if the patient be disposed to schirrus
hereditarily, or otherwise, - or if the tumor swell
much suddenly, remain hard, &c. we ought
to advise extirpation. If we could tell when
a schirrus was about to ulcerate, we ought
to advise extirpation soon, in order that
the operation may succeed. But if it were
likely to remain harmless, the patient would
hardly submit to so painful an operation.
In operating for a schirrus, it is of great
consequence to cut away all the diseased
part. We should cut through the sound
parts. In taking off a schirrous mamma,
we

we should cut, on the sides of the scirrhus, (194) down to the pectoral muscle, and dissect it from the muscle. We should even take in some sound flesh; or some which appears to be sound,- for parts which may be actually sound, yet being predisposed, the operation becomes an exciting cause. When we proceed to operate,- the patient is to be seated in a convenient light,- sticking plaster should be prepared- lint- a bandage- and some strong ligatures- If the skin be not discoloured, nor disposed to become diseased, as much of it ought to be left as will cover the wound; but if it be diseased, it ought to be taken away without regard to that circumstance. All diseased parts must be excised. When we have cut round all the diseased skin, (always cutting in healthy parts,) dissect out the tumor. When we are down to

to the pectoral muscle, we should have [193]
the arm stretched out so as to extend the
fibres of that muscle: It will thereby be much
easier dissected. If any part of the muscle
be diseased, it should be taken off without
hesitation. Whenever a bloodvessel is divided
it should be tied immediately; or it will
retract so into the cellular membrane
that it cannot be afterwards taken up.
Indeed it will stop bleeding in consequence
of a plug of coagulum forming in the mouth
of the vessel; but when the dressing has been
on awhile, the plug will come away
and the vessel will bleed again, so that
the dressing will have to be removed to take
it up; which is very disagreeable. When
the schirrus is completely extracted, after
wiping away the blood, the edges of
the wound should be brought together,
and retained there by adhesive plaster.
A.

A compress should be laid on each [195] side of the wound so as to press the skin close to the pectoral muscle, or parts beneath it, in order that no matter may form under; otherwise an abscess, and Ulcer, will be the consequence. The whole is then to be confined by proper bandages. Dr. P. has sometimes begun the operation when the Tumor appeared about the size of an egg; on proceeding with the dissection, he has met with little abscesses, or collections of matter under parts which appeared quite sound. He has met with several of these in the same case, and had to keep extending his dissection so as to take them all out; consequently, the operation was of much greater extent than he at first suspected. The Lymphatics are always affected secondarily in this disease; but

but they often are affected,- forming [197]
schirri in the axilla, and hard cords ex:
:tending from the breast to the axilla, in
the lymphatic ducts. In such cases the
operation is much more serious; and if
the tumor lay so high up, or rather
deep in the axilla, that we cannot
grasp beyond the substance of it, we
cannot be able to extract it completely;
and the operation should not be attempt:
:ed. But if we can grasp it completely,
and feel the soft parts beyond it, we
should extirpate. The whole mamma,
the axillary tumor, and the cordsun:
:ning between them, must be all taken
out. Dr. P. has found it useful to mark
the course of the cords on the skin
with a lead pencil, or pen and ink.
He then begins his incision above
the tumor in the axilla, carries it down
the

the course of the cords to the schirrous [199] mamma,- then carrying it round, first on one side of the mamma, (say below) and then on the other, so as to inclose all the diseased skin; and make the incisions meet at the far side. Then dissect out the mamma first, and continue the dissection along the cords, taking them out intirely. Leave the mamma attached to the cords; as it is convenient to hold by, and its weight draws out the tumor from the axilla. Do not cut parts that are on a stretch; as the parts cut will retract much,- & if there be vessels cut they cannot be taken up. Dr. P. has known of a patient bleeding to death in such a case. When the axillary tumor is dissected off so that it only adheres by parts above it which are sound, do not cut the adhering part off, for fear of vessels; but pass a strong ligature

ligature round the connecting part, & [204]
then cut it off below. The ligature will
slough off in a few days. The wound is to
be dressed as in the other case. If the
operation do not succeed so as to prevent
cancerous ulceration, or in cases where
the operation cannot be performed, much
good has been done by the use of
Fowler's Solution of Arsenic. Dr. P. has known
several cases where much relief has been
obtained by it. A Lady who had a can:
:cerous Uterus, so that she could not walk,
and was in great pain, &c. was so re:
:lieved by the use of it that she could
attend to her business; and was rendered
tolerably easy and comfortable, compared
with her former condition. Dr. P. re:
:lated several other instances of the
good effects of arsenic in cancerous ul:
:cers, and wished the Medicine to be tried.

Lecture 21st. Jany. 31st. — When Schirri (203) cannot be checked, nor discussed by the proper remedies, they should be extirpated by the knife; because if they progress, they will suppurate and become cancerous. In ulcerated schirri Dr. P. has used Fowler's Solution with advantage, — 5 drops twice a day, and increased to 10 drops bis in die. —

Hernia.

An Hernia is a falling down, or protrusion of some part of the contents of the abdomen. When the protrusion is at the umbilicus, it is called umbilical hernia. When in the groin, it is called Bubonocele. When under Pouparts ligament, femoral hernia, &c. — These protrusions are always through natural openings. The tumor is always in a sac formed by the peritoneum, which is easily and often much elongated. — Dr. P. confines his observations

observations here chiefly to the Inguinal (205)
Hernia,- which is a tumor in the groin
and upper part of the scrotum, formed
by the protrusion of some of the abdominal
contents through the abdominal ring. When
omentum is down, it feels more soft and
pappy and seneven than Intestine; which
is elastic, &c.. This disease is however, often
difficult to distinguish from some others; as
Bubo, Hydrocele, &c.. Bubo is generally to be
known by other symptoms, and by the
appearance of the penis. Hydrocele is
known by its always beginning at the
bottom of the scrotum. The scrotum is also
smooth, and by placing a candle behind
it, it is diaphanous. Sometimes, however,
there is a collection of water in a cyst high
up on the spermatic cord which is dif:
:ficult to distinguish; but proper attention
to it will enable us to ascertain the fact.
A

A Lumbar abscess may be known by [207]
laying the patient down and pressing on
the Tumor at the thigh;- It causes a tu=
=mor in the belly,- and by alternate pres=
=sure on the thigh and abdomen, fluctua=
=tion may be felt. The spine is likewise
often affected.— Recent Hernia, or indeed,
all Hernia may continue without
material injury to the patient;- but they
are always liable to stricture, or strangu=
=lation, and the surgeon should reduce
it immediately. It is generally very
easily reduced; and when the reduction is
performed, a Truss should be immediate=
=ly applied,- and the lower edge of the pad
of the truss should be just above the os
pubis so as to press exactly on the ring:
For when it presses on the coid and on
the pubis, the intestine will protrude
a little - and the pad will compress
the

the spermatic cord, and cause the [209]
Testicle to swell.. Unfortunately, however,
the rupture is not always to be reduced
so easily. When we proceed to reduce,- The
patient should be laid with his head
and thighs raised, and his pelvis low,- so
as to relax the muscles. Then press gently
from the symphysis pubis towards the
superior anterior spinous process of the
Ilium. If this do not succeed, we should
bleed largely,- even ad deliquium animi;
and in that state attempt the reduction
again. If this fail, exhibit a cathartic.
Dr. P. has found small doses of Jalap
and Cream of Tartar answer very well.
Give clysters, suppositories, &c.- We may
also at the same time use the Warm-
-Bath. The reduction has been effected while
the patient was in the bath. Clysters
of Tobacco Infusion may be used. Ice
applied to the tumor has caused a
relaxation

relaxation. It has been applied so as to [214] freeze the Integuments without any dis:
:advantage, except a sloughing of them. Sometimes all these fail. The parts gan:
:grene, and the patient dies. If they fail, the operation ought to be performed. If all efforts to reduce are fruitless for 36 hours, we ought then to operate.

Lecture 22nd. February 4th. — In young children, when the Truss is properly used, the Hernia is often completely cured; but in adults a radical cure is seldom effected. The Truss must be worn constantly. When stricture commences the circu:
:lation through the protruded parts is hindered. The passage of the faces is prevented. The tumor becomes painful. The patient has sickness at stomach, retching, &c. In this case the lower parts

of the patient should be raised, or the [213] foot of the bed may be raised, - and the operation of the taxis should be performed, after proper depletion; which must be copious. Violence should never be used. Dr. P. has known cloths wet with Laudanum applied to the tumor, and at the same time 2 grains of opium given internally, to procure a relaxation of the stricture, - after venæsection, clysters of Tobacco Infusion, and warm bath had all failed. - There are 2 modes of operating for Hernia - One of which is by cutting down upon the ring and enlarging it, without cutting into the sac. The other is by cutting into the sac. This last is most dangerous; as peritoneal inflammation is often induced, which is generally fatal on the third day. The pubes should be always shaved before the operation.

operation. An incision should then be [215]
begun about an inch above the tumor, &
carried down in the course of the ring an inch
and an half, or two inches on the tumor. Make
an opening carefully at the upper part of the
ring, and pass down a director below the stric-
-ture, - press up the director, and cut on it
with a scalpel; which is safely done. Then
reduce the tumor by the taxis gently; and
stitch up the wound as in common cases,
by the interrupted, or twisted suture. - But
sometimes the hernial sac must be opened;
as when we suspect sphacelus, &c. - When
this is the case, the dead part must not
be returned into the abdomen. If it be omentum,
it may be cut off with a pair of scis-
-sars, - taking care not to cut any intestine
with it. It should always be cut in the
sound part. Dr. P. does not approve of
cutting off the dead part of the Intestine,
and

and stitching the ends together; because [217] it is difficult to tell when it is absolutely dead,- and because by keeping the ends of the intestine out of the ring, or at the ring, if it do slough the ends may come in appo:sition. Another case which renders the opening of the sac necessary, is when the stricture is made by the upper end of the sac, and not by the ring:- for there are cases of this kind, where the tumor will move in the ring, and is not pressed by it. Dr. P. related a case in which a portion of omentum was protruded, and by exertion a small portion of ilium was afterwards pressed down. A stricture now took place; the intestines were much inflated, and thereby drew up the omentum which adhered to the sac at the bottom. This drew all up so high that the strictured part

part could not be found. In this [219] case the strictured part should be divid:ed by a bistouri, and then the hernia may be reduced. Another case which renders it necessary to open the sac, is when the contents of it cannot be reduced without it be dilated. — In Femoral Hernia, the protruded parts come under Pouparts' ligament. It may be readily known by its being more compressed than hernia inguinalis. It lays under the fascia of the thigh. The Ligament is divided in the oper:ation for this. There is considerable danger, however, in dividing it, either of cutting the spermatic cord, or the Epigastric? artery. In the former case the man would be castrated, - and in the latter, the hemorrhage would be difficult to stop. Dr. P. performed this

this operation on a female, with [221] success, after the intestine was much diseased. Dr. Hutchinson performed it successfully on a man.

Lecture 23rd. Feby 7th. — Peritoneal Inflammation is very unmanageable by medicine. It generally proves fatal in 3 or 4 days, — and should be anxiously avoided in operating for hernia. But where the sac must be opened, we should cut through the cellular membrane and tendinous bands, beginning just above the upper end of the sac, and continuing down upon it a sufficient distance, say 2/3 of its length. If the intestine cannot then be reduced, the ring must be opened by a blunt-pointed bistouri.

Hydrocele — is a collection of water in the Scrotum. It is of 3 kinds. First, Anasarcous. In this case the scrotum is equably distended

distended; and unless much distended /223/
retains some degree of rugosity,- feels doughy,
&c.-- Second- Hydrocele of the Tunica Vaginalis
Testis, is a collection of Water in the tunic,-
It begins at the bottom of the sac,- is often
diaphanous,- is largest at the bottom. These
marks distinguish it from hernia. Schirrous
testicle is distinguished from Hydrocele by its being
heavier, &c.- Hernia humoralis is known
from it by the inflammation attending.
If there be water effused in hernia huma:
:alis, as is sometimes the case, the testicle
feels hard in the tumor,- and is thus known.
Third- Hydrocele of the Spermatic Cord,
is seated in a cyst in the membranes
surrounding the cord, just below the ring.
Dr. P. thinks he has seen a case where
it extended within the ring. It is known
by nearly the same marks as the second
kind.-- The patient feels but little in:
:convenience from Hydrocele, except
sometimes

sometimes the skin excoriates. A truss [225]
bandage is used to suspend the tumor.—
The old practice in anasarcous Hydrocele
was to make incisions in the scrotum,—
these often mortified and sloughed off, leav:
:ing the testicle bare. Punctures are much
better. Dr. P. saw a case of Hydrocele of the
tunica vaginalis testis in which the tunic
had burst, and the disease was converted
into anasarcous hydrocele. The blood
which was effused had given the skin
a black appearance, that had been mis:
:taken for mortification;- But Dr. P. ex=
:plained the case, and foretold an ab:
:sorption of it,- which soon took place.—
In Hydrocele of the Tunica Vaginalis Testis,
the water is discharged by a puncture
made into it with a Trochar, or Lancet.
Where the tumor is very large, a trochar may
be used;- But where it is small, a lancet

lancet is best and safest. A canula is /227/
to be introduced into the opening, to con:
:duct off the water, otherwise the orifice of
the skin will slip to one side of that in
the tunic, and the water will run into
the cellular membrane. This will give the
patient anxiety; and should be avoided.
If this should take place, a fresh puncture
should be made into the sac through
the external orifice immediately, and
a canula introduced. The wound is dres:
:sed by closing the edges with sticking plas:
:ter. To make a radical cure, Port
wine (or Madeira, but Port is rather better)
is injected into the tunic, and kept
there until it excites pain, and inflam:
:mation, which closes the sac. When this
is to be done, Dr. P. makes the incision with
a lancet, and an assistant holds a canula
close

close by, which is introduced immediate- /229/
-ly, and the water drawn off. A gum elastic bag filled with wine, supplied with a pipe and stop-cock is used. The pipe fits the canula, and the wine is injected through it. It is kept in from 5 to 10 minutes; as the patient can bear. While injecting Dr. P. presses the scrotum round the canula, to prevent the wine from returning; which it would do when the opening is made with a lancet, - it being larger than the canula. Dr. P. related a case of a man who had hy=-drocele, and his testicle adhered to the lower and fore part of the scrotum. Two Surgeons operated on him in the usual way, but no water came, - a few drops of blood only followed the trochar. They had pierced the Testicle! - Mr. John Hunter was called in, - he examined, and ascertained the state

state of the case. He then punctured the lower and back part of the scrotum, & drew off the water.. A Surgeon in London, who punctured the scrotum with a Trochar for this operation, introduced the stilette into the tunica vaginalis testis; but the canula forming a shoulder did not penetrate it,- however, it being opposite to the orifice, the water ran off. But when he proceeded to inject the wine, it did not enter the tunic at all,- but filled the whole cellular membrane of the scrotum & perineum!- Upon withdrawing the canula the wine did not return, but remained. It caused a dreadful inflammation and fever,- and finally gangrened and sloughed off, leaving the contents of the scrotum bare. It had like to have cost the poor man his life.. From this circumstance,

circumstance, Dr. P. is induced to give
the Lancet the decided preference for puncturing. — Sometimes there will be an effusion of serum during the inflamma:tion and healing of the tunic; but it will frequently be absorbed, and the cure be complete. However, it sometimes collects again; and then a new operation is necessary. In this case several methods have been proposed for effecting a radical cure; two of which Dr. P. relates. — The first is to make an incision into the tunic, and introduce lint smeared with simple cerate, or Unguent. Basilic. into it, — so as to excite inflammation and granulations. — This will cause the parts to adhere completely. But often small shreds of the lint will remain, which cause abscesses, &c. that are troublesome. John Hunter was in the practice of introducing Poultice-paste,
or

or flour, which excited inflammation and the pus which was discharged carried it out completely. In this way a radical cure was effected. The cavity being obliterated, no future collection could take place. Dr. P. prefers, and practises this second method with success. In incipient Hydrocele, or where the collection is beginning to take place after the operation, Dr. P. has found pouring cold water on the tumor from the spout of a tea-kettle, to be a very good practice, - though it have twice failed with him in cases of incipient collection after the operation; and he was obliged to have recourse to the abovementioned operation with the paste, &c. pouring on the cold water has been found particularly useful in young children. After the operation, the scrotum is supported up by keeping the thighs close together, - or by a trufs-bandage round the body & under the scrotum.

Lecture 24th. Feby 10th. — There are 2 methods of treating Hydrocele, viz. palliative, and radical. — Dr. P. thinks Hydrocele might be cured without a puncture of the tunica vaginalis testis, to wit, by proper pressure on the swelling. He has lately seen a case where a large quantity of lymph was absorbed, by pressure on those parts, — and infers that serum might also be absorbed. He has not yet had a chance of trying it; but he intends it whenever an opportunity offers. He thinks the water might accumulate again, — but perhaps it would often succeed. — Calculus, or Stone. Calculi are found in various parts of the body. Dr. P. has seen a calculus as large as a pea, in the brain, near the basis of the skull. But the most common seat of calculi is in the urinary organs. The matter of stone exists in a fluid state in

in the urine of every person; but more
in different persons, and in the same
person at different times. It is deposited
when the urine stands in a vessel. Dr. P.
has seen a case where a person with
a scrophulous tumor of the knee-joint
had a large quantity of calculous matter
deposited from his urine when it stood
in a bason. Any solid foreign body in
the bladder will become a nucleus, and
occasion a deposition of calculous matter.
The calculi are often formed upon small
clots of coagulable lymph, or blood thrown
out by inflammation. Hence, Dr. Rush
proposes with great plausibility, to pre-
vent the formation of calculi in this way
by venaesection and such other remedies
as remove inflammation. Calculi are
often formed in the pelves of the kidneys,
and cause great pain in their passage
to the bladder. Vide Bromfield, on this subject.
Calculi

Calculi are of different colors - are laminated. /244/
They generally cause excruciating pain in passing the Ureters, - which is to be treated at first with antiphlogistic remedies, and afterwards with anodynes, &c. - After the pain has travelled down the loins, and then ceased, we may conclude the calculus has got into the bladder, - and the discharge of it from that place should be attempted, by the patient bending forward when he urinates. This experiment may be tried frequently. When young boys are affected with gravel, they often pull the penis, or prepuce, very much after making water. - A variety of remedies have been used for calculus, - as carbonated Soda, Uva Ursi, &c. - But they only palliate - They never effect a cure. - And the various solvents which have been proposed

proposed to be injected, it is probable, [243] will not succeed,- as they are all liable to excite inflammation, and render the disease worse. There have been instances of calculi remaining in the bladder without causing pain for many years; but they are rare. The presence of a stone is ascertained by introducing a sound, which, being metallic, makes a noise when it strikes the stone. In this case, the Operation is the only remedy.

Lecture 25th. Feby. 14th.- The only way of ascertaining the presence of a Stone in the bladder with certainty, is with the metallic sound,- which ought to be first warmed by dipping it a while in hot water, and then oiled, to facilitate its introduction. The sound is generally

generally introduced with the concave (245)
side to the abdomen, in which way it is
generally introduced readily,- and the stone
is felt and heard immediately: But if it be
not heard immediately, introduce the
sound to the fundus of the bladder, and
move it sideways, when it will some:
:times strike the stone. — Sometimes the
Urethra gets folded, and the sound cannot
be introduced in the above way. In this
case the sound may be introduced with
the concave side to the perineum un:
:til the point reaches the membranous
part of the Urethra, and then turn
the concave side to the abdomen, not
letting the point recede. The object is to
dilate the Urethra. Things being thus
ascertained,- the day before the opera:
:tion the perineum should be shaved
clear of hair,- and a mild laxative,
as

as castor oil, should be given,- and 4 [247]
hours before the operation, the patient shd
have an emollient clyster to evacuate
the lower bowels completely. The patient
should retain his urine for a few hours
previous to the operation, so as moder:
:ately to distend the bladder;- and use some
demulcent drink, as barley-water. In
Children, Dr. P. ties a ligature moderate:
=ly tight round the penis, to prevent
them from urinating. About an hour
before the operation the patient should
have a dose of Laudanum to compose
his mind. These things being premised,
a fillet should be provided, also a scal=
=pel or two, a grooved director perfectly
smooth, and a very keen gorget, which
was a rare thing until Dr. P. invented
a gorget with a blade to come off, that
can be sharpened as easily as a knife.
Ue

We should also have a blunt gorget [249] to introduce afterwards. The next in=
=strument is a pair of forceps, a scoop, a lever, a syringe to wash away any fragments of stone, a needle, tenaculum, ligatures, sweet oil, &c. — The best table for the patient is a common dining table, or one of about that breadth when the leaves are down. The bed should be previously prepared, with a blank=
=et, or oil cloth under the patient to catch the urine which constantly oozes. The patient being then placed on the table, his hands are tied to his feet with the fillet — a noose on his wrists, he grasps the outside of his feet, and then the ligature, or fillet is passed round both hands and feet. This must always be done; for no person can be trusted to his own fortitude.

An

An assistant stands on each side, hold:-
:ing the patient's feet with their hands, and his knees in their axillæ. The grooved staff is then introduced into the bladder, and the end by which it is held is turned up on the patient's right iliac region, or to:
:wards it, where it is held by an assis:
:tant,- putting his thumb on the upper side and his fingers below, so as to be able to press the director, with the urethra, to the left side of the perineum. The Surgeon then cuts on the groove with a scalpel, beginning on the left side of the raphé near the termination of the scrotum, and going obliquely, towards the tuberosity of the ischium, Making a pretty large external orifice, say 3, or 3½ inches;- for it is more con:
:venient to have a free opening. Dr. P. says the bulb of the urethra is al:
:ways more or less cut;- but the object is

is to cut on the groove in the mem- (253)
-branous part of the Urethra. Having
got into the groove, (which may be
sometimes seen, and always distinct-
-ly felt) the beak of the gorget is put
in it, and rubbed backwards and fowards
several times in order to be certain it
is in the groove. The Surgeon then takes
the staff in his left hand, raises it up
a little from the abdomen, and pressing
the beak of the gorget against it, pushes
it into the bladder, - so as to make a
sufficient incision; holding the edge of
the gorget laterally. It is proper to make
the incision when the patient is not
straining nor bearing down; for when
straining, the fundus of the bladder is
pressed down by the abdominal mus-
-cles, - and is liable to be cut by the gorget.
Dr. P. once saw the gorget expelled with force

force while laying in the bladder, /255/
by their straining; which proves the pro:
:priety of the above advice. Having push:
:ed in the gorget, the staff is kept with:
:drawn. The forceps are introduced into
the bladder along the cavity or groove
of the gorget; which is kept withdrawn.
The Surgeon then takes a handle of the
forceps in each hand, opens them gently,
and feels about for the stone; Which
having found, he grasps, and endeav:
:ours to extract. If any resistance be
made, he should introduce a finger
and feel if the stone be grasped in
the most advantageous manner; for
Calculi are not always spherical.
Dr. P. has always been able to extract
the stone without much laceration; but if
the opening should ever be too small, he
would introduce his finger, and with a
blunt-pointed bistouri dilate the orifice in the bladder.

bladder. When one stone is extracted, we [257] should be certain there is no other, before we quit;- and if there be more, they should all be extracted in the same way. Dr. P. has seen 4 in a boy. When there are more than one, they are generally smoth on one side in consequence of friction. When the stone is any how broken, (which should be avoided if possible) the scoop has been used;- but Dr. P. has not found it very serviceable. When the pieces are small, it is better to inject some mild fluid into the bladder, which brings them away. All the stones and pieces being taken away, the patient is to be untied and put to bed. It is the common practice to put lint in the wound; but this causes clots of blood to form up in the wound, and does no good. Dr. P. omits it intirely. The patient is laid on his side in bed. His knees are kept together by a handkerchief tied round them.

Lecture 26th. Feby. 18th. — About /289/ a week before the operation for the Stone, the patient should be put upon the antiphlogistic regimen, - and if plethoric, some blood should be taken. Contrary to the advice of Mr. Bromfield, Dr. P. recommends to have the bladder distended with urine to a moderate degree. — The operation of Lithotomy upon Women is very simple. A curved director is introduced into the bladder, and the gorget pushed along it laterally into the bladder. The labia pudendi should be well separated by an assistant, so as to prevent them from being wounded. This will make opening sufficient for a moderate sized stone. But if it be ascertained, through the vagina, that the stone is large, a bistouri is introduced per vaginam

vaginam, guarded by the finger; and [261]
thus guided the parts are cut through,
and the point of the bistouri is lodged
in the groove of the director (which is in
the bladder) near the point. Both are
then withdrawn together until suffici-
ent opening is made. Dr. P. cannot tell
from experience which is the better
method of operating; but when the stone
is small he would prefer the lateral
operation, - and when large, the other.
There is generally an incontinence of
Urine for some time, after the operation
of lithotomy; but in time it heals well.
Sometimes fistulous openings are formed
in perineo. They may often be healed by
irritating them with a knitting-needle
moderately hot, - but not so hot as to form
an eschar. If they be kept up by
small stones in them, they may be
ascertained

ascertained by passing a probe; and (263)
they should be removed. Dr. P. had a case
where the pulse was suddenly after
the operation; but as no pain was
felt in the hypogastric region, he had
hopes of a favorable issue, which took
place. — Fistula in ano — A com:
:plete fistula is when there is an
ulcer opening near the orifice of the
rectum, and extending up along side,
and opening into the rectum. An
incomplete fistula is when there
is an ulcer similar to the complete
one, except that it does not com:
:municate with the rectum. An
occult fistula is when there is no
external opening, but there is a com:
:munication into the rectum. — Some:
:times in very bad fistulae there is
very little discharge. Physicians are

are very apt to mistake forming fistulæ
during the inflammatory stage, for piles;
and neglecting them, suffer this loathsome
disease to form. Inflammations of the
anus and buttocks should be attended
to immediately,- and treated with anti=
=phlogistic remedies,- as lead-water poul=
=tices, venæsections, &c.— Incomplete fistu=
=la have small openings, with callous edges,
which do not admit the discharge of the
matter; and it collects within until they
gather and burst. This they often do,- and
after bursting, close up again,- and make
the patient, and often the physician
believe it will heal of itself. Dr. P. how=
=ever, never knew it heal.— In cases
of complete fistulæ, a portion of stool
and flatus are discharged every time
the patient goes to stool. This circum=
=stance will effectually prevent a cure.
When

When suffered to go on, it often dissects [267]
the rectum from the surrounding parts.
In the morning before the patient goes to
stool, adhesions are often formed between the
rectum and those parts, by the granulati:
:ons which are thrown out in the night;-
But when he goes to stool the anus is
pushed down, which detaches the new
adhesions, and thus prevents a cure from
being effected. As the parts are not suffered
to lay long in contact, a cure cannot be
accomplished.- When the abscess is form:
:ed round the rectum, and protrudes cir:
:cularly round it, the Surgeon is tempted
to open it in this direction;- But it
should never be done; for it will
put the parts in the predicament
just mentioned. The opening
should be made from the fistulous
opening into the rectum.

Lecture 27th. Feby. 21st. — Strictures of the Urethra. — A stricture is a diminution of the cavity of the urethra. It is commonly seated near the bulb, or before it, — and sometimes at the end of ~~the~~ urethra at the glans, so small as only to admit a small knitting needle to pass; — And it is sometimes seated in the membranous portion, behind the bulb. — Strictures are of 2 kinds, — Temporary, and Permanent. They are attended with difficulty of urinating, pain sometimes in the hypogastrium, straining so as to cause prolapsus ani sometimes. In cases of permanent they are often attended with a gleet. The urethra behind the stricture is generally enlarged; — but before it the cavity is diminished. A strictured urethra in the dead body appears as if a ligature were passed round it externally. Stricture is often aggravated by intemperance in

in drinking,- as of strong beer, &c.- It is al- /271/
-so aggravated by Coitus, &c.- In cases of tem-
-porary stricture, sometimes the bougie
is grasped very tight while in, and is in-
-dented by the stricture.- Dr. P. uses a bou-
-gie made of waxed linen, slightly conical,
and suddenly tapering at the point. This
is proper in order to get admittance in-
-to the stricture; and behind the point
it should be large in order to dilate the
stricture. The bougie often causes a sick-
-ness and faintness which sometimes lasts
for an hour or two;- but this seldom occurs
after the first time. The bougie is worn
a short time at first, and the time is gra-
-dually increased until the stricture be
removed. Dr. P. has succeeded in introducing
the bougie by bending the point of it, after
it had failed when straight. The caustic
has been used in cases of permanent stricture,

stricture, fastened at the end of a bou:-
:gie. Dr. P. has used the Lancet to divide the stricture with satisfaction. The use of this requires good anatomical knowledge. Bou:
:gies should not be used in temporary stricture. Venaesection, Warm bath, Emetics, &c. are to be used. The Tinct. ferri Muriat. has been used, 10 drops in the dose, until it induced emesis. A piece of Opium has been introduced on a bougie down to the stricture. Anodyne injections may be used. Those strictures are often caused by the venereal disease;- but sometimes they oc:
:cur without. They also occur in other parts; as in the aorta, Oesophagus, &c.

Suppression of Urine - Is induced by various causes: Commonly by stricture, - when a bougie is to be used; or a catheter with a bougie point. But first venaesection, warm bath, &c. are to be tried. It is said putting the

the end of the penis in cold water has [275] relaxed the stricture. A stone falling on to the neck of the bladder has caused sup:pression,- here a change of posture will relieve. When the suppression continues long, the bladder becomes much distended; and unless relieved, mortifies, and death ensues. Dr. P. has divided the stricture with the lancet with success, and relieved the complaint. Where none of these methods succeed, and the bladder goes on distending, it must be punctured, to discharge the urine. There are 3 modes of puncturing the bladder,- 1st. Above the pubes- Shave the pubes, make an incision about an inch, or so, above the pubes, and introduce a curved trochar into the bladder,- have a female catheter to fit the canula, and, having with:drawn the stilette, introduce it through the canula beyond the end of it, so as to defend the bladder. The puncture should not be

be made in this place until the blad-
-der be considerably distended,- or the peri-
-toneum will be wounded, and the Urine
will flow into the cavity of the abdomen,
and cause a fatal inflammation. When
the bladder cannot be punctured above the
pubes, the 2nd. mode of puncture is to be
used, viz. Through the rectum. First intro-
-duce the finger above the prostate gland.
The finger will serve as a director for the
canula. Some surgeons leave the canula
in,- but it irritates too much. A flexible
catheter should be introduced through the
canula, and this last withdrawn.- Where
the prostate gland is enlarged so that the blad-
-der cannot be punctured through the rec-
-tum, and where the bladder at the same
time cannot be punctured above the
pubes, the 3rd. mode must be used, viz.
In the perineum. By cutting between the

the accelerator urinæ and the erector (279)
penis muscles down to the urethra,
and puncturing the bladder from thence.
If there be any obstruction at the neck
of the bladder, a staff may be introduced
into the urethra, and by cutting into the
groove, a Trochar may then be pushed
into the bladder along the groove. —
Where this operation can be done above
the pubes, it is to be preferred; but cir:
:cumstances must govern with res:
:pect to the place. A purge of 10 grains
of calomel and 2 grains of opium, is very
good in cases of suppressed urine. Stric:
:tures are the remote cause of fistula
in perinæo, - behind them. ——

Lecture 20th. Feby. 24th. — Strictures
in the urethra are best dilated by a bougie.
Bougies are made by dipping pieces of fine
linen in melted wax, and cutting them

of a proper shape,- slightly conical and [284] tapering at the point. They are then rolled up smooth, and finished by rolling them nicely on a marble slab with a spatula, or smooth board. The point should be small, but round and smooth,- or it will irritate. When one of this kind is introduced, pushing the tapering point farther every day, answers the end of a larger one being introduced every day. But when the stricture is so close that a bougie cannot be introduced, a caustic has been used to destroy the stricture,- wrapping a small piece in the end of a bougie so as to apply it against the stricture. Mr. Hunter used a silver canula to guard the urethra; but with this, it is uncertain when the caustic is applied exactly to the stricture. Dr. P. uses a small cap on the caustic, made of bougie plaister, and rounded on the end of a sound;- a string is fastened to it, to

to withdraw it by. The cap guards the (283)
caustic completely; and softens when ap=
=plied, so as to be easily withdrawn. The
Caustic is left 5 minutes in contact
with the stricture, - or 10, 20, or more; ac=
=cording to circumstances, - and repeated
pro re nata. - A Lancet in a canula
has been also used in strictures, to divide
them. It is concealed until it reaches
the stricture, in the canula; and then
it is pushed through the stricture. There
can be but little danger from push=
=ing it through the stricture, - for the
urethra is generally dilated behind it: -
And if it did go into other surrounding
parts it would not do any harm. The
parts would heal as in other parts
of the body. Even if it perforated into
the rectum, Dr. P. thinks it could do no

no harm; for when the bladder is tapped [285]
in this way it soon heals. Dr. P. has contriv:
:ed a curved canula adapted to the Urethra
below or behind the bulb. Dr. P. relieved a
suppression of Urine from stricture, by
the lancet in the canula. After dividing
the stricture, he introduced a flexible
catheter into the bladder, and drew off the
Urine. He left in the catheter so that the
cut sides of the stricture might not u:
:nite again. He preferred leaving in the
Catheter to introducing a bougie, because
the bougie would have had to have been
withdrawn every time the patient uri:
:nated; which would have been very in:
:convenient. He left in the catheter un:
:til suppuration took place, - after which
there was not so much danger of an
Union. Dr. P. has known a paralysis
of the bladder to come on after stricture
had

had existed some time, - so that when [237] the stricture was dilated by a bougie, still the bladder did not contract, nor could the urine be voided until a catheter was introduced, - when it was drawn off. - Dr. P. has known a case of suppression of urine, where the prostate gland was enlarg:ed so that it pushed up the urethra in such manner, that the common flexible catheter could not be introduced in its usual shape; - but he succeeded com:pletely by turning up the point of it so that it followed the curve of the urethra. This is an important fact to remember. He has also succeeded in introducing the catheter in a case of stricture in which the round end of the catheter could not penetrate, by fixing on its end a piece of bougie, pointed so as to enter and di:late the stricture, and admit the catheter. He has a thread fastened to the piece of bougie

bougie, so that if it should accidentally /239/
come off, he could withdraw it from the
bladder. The use of this has prevented tapping
in several cases with Dr. P. and Dr. Wistar.
Vide Med. Repos. Hepade Vol. page
Dr. P. makes catheters for himself, by dis=
=solving gum elastic in spirit of Turpentine,
which has been frequently distilled from
quicklime. He strains the solution, so that
the fluid may be of equal consistence - eva=
=porates to a proper thickness, and then
dips in the prepared silk several times,
until it has a coat sufficient. He removes
the stickiness by dipping them in weak
ether. Vide Med. Repository, Hep. Vol. page.

Amputation - Vt. of the Thigh -

As a general rule, as much of a limb
should be saved as possible. The leg, however,
is an exception to this. - The Instruments
necessary in amputating, are, a Tourniquet,
or two, compress, a knife, a broad piece
of

of sheepskin, slit in this form ▭, /294/
called a retractor,- a saw, two or three rollers,
a pair of cutting nippers to pinch of spicula,
rags, warm water, sponges, ligatures, &c.-
The patient should have a dose of Laudan-
-um before the operation. He is laid on a
table with his leg hanging off the end, or
side, supported firmly by an assistant.
The Tourniquet is then applied pretty
high up on the thigh, (having a pad, or
compress under it, confined by a bandage
round the thigh, which serves for the straps
of the tourniquet to rest on,) and screwed
pretty tight,- until the anterior Tibial
artery ceases to beat; which is felt on the
top of the foot.- Some apply a roller tight
round the place to be cut,- not to guide
the knife;- but to compress the soft parts,
and prevent them from retracting.
H. P.

Dr. P.- however, does not. The Surgeon then [293]
takes the straight knife, which is best, and
divides the skin and cellular membrane
round the thigh, at two cuts. Although as
much of the limb should be saved as poss=
=ible, in this case,- yet the Surgeon should
always cut on sound parts. These being
divided, an assistant pulls them up, the
surgeon dissecting them a little. When suf=
=ficiently drawn up, the Surgeon then cuts
(close to them) through the remaining soft
parts to the bone, at two cuts as before.
The retractor is then applied round the
bone, so as to draw up all the soft parts,
and defend them from the saw,- which
is next used; Beginning, close to the retract=
=or, with short strokes of the saw, and gra=
=dually increasing them in length. The
assistant who holds the leg, must hold
it firmly now. The bone being sawed
through

through, if any spicula remain, they should be cut off with the nippers. The Blood-vessels are then tied. The femoral Artery is taken up with the needle, - i.e. the needle is passed through the Artery, to prevent the ligature from slipping off, - and then the ends of the ligature are passed round it, and securely tied. The small arteries are next taken up with the tenaculum, and tied, - first clearing away the clots of blood in order to discover them. The Tourniquet is then gently relaxed to see if they be secure. If any are not tied, they are then secured. This being done, it is proper to remove the Tourniquet a little while, in order that the blood in the veins may return; as they often ooze blood while it remains on. It is proper to have two tourniquets, provided one should

should break, or give way. Dressings [297] are now to be applied. A long roller is applied once or twice round the waist, then carried down the thigh, rolling it moderately tight, until it arrives near the end of stump. The edges of the wound are drawn down and together, so as nearly to meet across,- but a thin pledget of lint spread with cerate, is placed between the lips of the wound to prevent union by the first intention;- as this would prevent the discharge of serous matter from the vessels within, & produce an abscess. Dr. P. prefers letting it heal by granulations,- which is more safe, and likely to be more permanent. The ends of the ligatures are brought out of the wound at the edges to which they are nearest. Over the wound are then laid two strips of adhesive plaster (lengthways with

with the thigh) so as to keep the edges of 209
the wound together. Over these is then laid
a pledget of lint spread with cerate. O=
=ver this, two simple pieces of roller, or
longish folded pieces of linen,- and over
them, a large broad pledget of tow, spread
with soft salve. These are all drawn up
over the stump, towards where the long
roller on the thigh was continued down.
This long roller is now carried down
over the dressings to the end of the
stump; which dressings it keeps
firm in their places. The patient
is then carried carefully to bed. Some=
=times twitchings of the stump
occur. They are to be treated with
Laudanum; until which operates,
a person should sit by the patient
and hold the stump, to prevent
its convulsive motions. ——

Lecture 29th. Feby. 28th. — Am=(304)
=putation of the Leg. The rule of saving as much sound part as possible, does not hold good in amputation of the leg. In cases of disease of the ankle-joint we may either amputate at the small of the leg, or just below the knee. At the ankle, however, it is difficult and expensive to fit a foot. And the stump is liable to be irritated. It looks better, it is true, and for a man of fortune who wishes to appear to advantage in a drawing-room, it may be thus performed. But it is very different in the case of a laboring man; and should not be done at that part. Even if he shd walk on the bended knee, it is very awk=ward sticking out behind, - and is apt to be hurt, to get entangled, &c. It is better to take off the leg just below the knee, in this class of people. A sailor in the Penn. Hospital had it twice done in order to have it off at the knee.

the knee. When the leg is amputated, the [303]
Tourniquet is applied above the knee, as in
taking off the thigh... Dr. P. makes an oblique
incision, going lower on the back part of
the leg, on the the soft parts, so as to save
skin enough to cover the stump. He am:
putates about 4 inches below the joint.
First cutting through the skin & cellular
membrane, and dissecting up the skin
high enough to leave a flap. The muscles
&c. are then cut through close up to
where the dissection of the skin stopped.
The soft parts between the bones are next
divided by a small two-edged knife called
a catline. Any vessels which may be divid:
:ed, are next tied: If they be not evident
at first, relaxing the tourniquet will show
them, by the bleeding orifices. If they can:
:not be secured by the tenaculum, they
may be taken up with the needle. A
retractor is used which has a narrow
strip

strip in the middle to go between the bones, thus  . This draws up, & defends the parts to be saved. The bones are next divided by the saw,- observing to saw off the fibula first. The stump is then dressed with adhesive plaster,- as in the case of the thigh. The pledgets kept on by a roller, &c. — In amputating the Fingers, they should be taken off at the joint,- the first joint above the diseased part. An oblique incision is made (inwards towards the cavity of the joint) so as to save skin enough to cover the end. In taking of a Metacarpal bone,- it is separated from the rest and then divided with a small saw, called a metacarpal saw. It is dressed like the other cases,- or as occasion points out. — Tapping for the Dropsy- was formerly done with a triangular-pointed trochar, and a round canula. This makes

makes a punctured wound, which is ob- /307/
-jectionable. Dr. P. prefers, and uses the Lancet;
making a puncture or perforation in the
Linea alba, and immediately introducing
the female catheter through the orifice, to
draw off the water. He has a piece of waxed
linen wrapped round the catheter like
a cone, with the apex towards the
end introduced, thus  - and when
the orifice is too large for the catheter
it can be pushed up to this part, so as to
prevent the water from oozing by the
side of it. When the water is drawn,
(always applying a roller round the body
while it running) the wound is closed
by sticking plaster, and a compress laid
over it, confined by the roller. Union
by the first intention is to be procured
if possible; - And this tendinous substance
unites very well. If it do not, inflamma-
-tion

:tion of the peritoneum comes on, [309]
which is generally fatal. Sometimes the
water will ooze out at the orifice,- and
Dr. P. proposes to make an oblique per:
:foration, transversely of the abdomen; first
going through the skin and cellular mem:
:brane, and then carrying the lancet a
little ways across before it perforated the
inside of the parietes,- so as to make an
opening much similar to that of the
ureters into the bladder. In this case
it would act like a valve, and pre:
:vent any leaking. The old place of punc:
:ture was in the middle of a line drawn
from the umbilicus to the superior an:
:terior spinous process of the left ilium.
But here the epigastric artery was lia:
:ble to be wounded;- And Mr. Cline did
wound it, and suffered his patient to
bleed to death;- which Dr. P. thinks need not

not have been the case,- for he might /314/
have made a longitudinal incision down
to the artery, when he saw bloody water
coming away, and taken it up. The
punctured part would have led him
to the place; and it might have been
done with safety, as the artery lays extern:
:ally of the peritoneum,- so that that
membrane need not have been opened.-
However, Dr. P. prefers the puncture thro'
the linea alba,- as being more safe, &c.-
The bladder should always be evacuated
just before the operation. It is of importance
to be certain that it is water in the
abdomen;- for a pregnant woman,
who had before been tapped for dropsy,
was once tapped by a country surgeon.
The trochar was plunged through the
parietes abdominis and uterus, into the
body of the child!- The woman soon
died, and dissection showed the state
of

of the case. The presence of water may be [313] ascertained by the fluctuation felt by stri:
:king the abdomen, (especially in males,) with considerable certainty. Where the dropsical collection is too viscid to be dis:
:charged, the case is hopeless, and generally fatal. — In some cases of difficult or ob:
:structed breathing from causes acting at the glottis, or rima glottidis, it becomes necessa:
:ry to perform the operation of Tracheotomy. In doing this, a longitudinal incision is made through the integuments, - and then a transverse one between the Thyroid and Cricoid cartilages, so as to admit a smooth canula. The canula is confined by tape strings:- these are fastened to the neck on each side by pieces of adhesive plaister. A piece of adhesive is put on the neck, on each side, - the tapes are then laid on them and confined by other pieces of adhesive plaster

plaster on the top of these. When the /315/
difficulty is removed, the canula is with:
:drawn, and the integuments are brought
over the wound, and it is suffered to heal
intirely. It is best to make the first inci:
:sion longitudinally, - as it might not heal
so well, - and would probably become fis:
:tulous, if both incisions were made trans:
:versely. — Hemorrhoidal Tumors - ex:
:ist round the verge of the anus, and also
within the rectum. The external ones may
be readily extirpated by the knife; as the hem:
:orrhage can be easily commanded, by pressure,
&c. - But when they are seated within the
rectum, the knife cannot be used with
safety. One case, in which Dr. P. saw the
knife used, had like to have been fatal,
the hemorrhage was so great. Scarcely any
pressure which could be made could
stop it. Those tumors are very irrita:
:ble

irritable and painful. They are generally [317] protruded with a portion of rectum, when the patient strains hard;- and in this case they should be seized with a forceps and pulled out, one after another, so that a ligature can be passed round each so tight as to prevent circulation;- and then the tu=mors will slough off in 4 or 5 days.- When not extirpated, those hemorrhoidal tumors have been treated with leaches,- ointments,- a Liniment of Lead-water, Laudanum, & sweet oil, &c.- Aneurism- Is a mor=bid dilatation of the heart, or any part of the arterial system. It is divided into True, and False aneurisms. A True a=neurism is one which is not caused by any external violence, nor wound. A False aneurism is one which is caused by vio=lence, wounds of the arterial coats, &c.- Dr. P. says the proximate cause of aneu=rism

aneurism consists in the momentum [319] of the blood being too great for the strength of the arteries. Strong drink has been supposed to cause aneurism. Sometimes all the arteries appear to be preternaturally dilated. It has been supposed that wounding the external coat of an artery with a lancet, caused false aneurism;- But Messieurs J. Hunter, and Home, have proved, by experiments on the living dog, that taking off the external coats will not cause aneurism. A pulsating tumor is not a true pathognomonic sign of, or does not always attend, aneurism;- for the blood coagulates in the sac of an old aneurism, and prevents the pulsation from being plain. The coat of the sac is as thick as the other parts of the artery;- which, says Dr. P. shews it is not composed of arterial coat,- but of condensed cellular membrane. No relief

relief is afforded to this disease by med- /324/
-icines given internally. venæsection, rest,
low diet, and moderate compression, are
the best remedies. It is said that this
treatment, and particularly compression,
has cured recent aneurism; but Dr. P. has
seen it fail. It can only be used with any
degree of convenience in aneurysm of
the extremities.— Aneurism is most
common in the <u>ham</u>. Formerly, after
applying the Tourniquet on the thigh,
the sac was opened, and the vessel tied
at the upper part of the sac. This way
seldom succeeded; for the artery so near
the sac was generally diseased.. The next
mode, which was more successful, was to
amputate the thigh. Here the vessels were
tied on a <u>sound</u> part.— Mr. <u>Hunter</u> thought
of tying the femoral artery <u>just above</u> where
it enters the tendon of the <u>Triceps</u> <u>muscle</u>.
This

This succeeded,- and saved the limb,- & [323]
is now practised;- but this sometimes fails.-
The sac inflames and suppurates, &c. or the
limb dies for want of nourishment. —
To perform this operation,- a Tourniquet
is put round the limb ready to be tight:
:ened, but is left loose. An incision is
made in the course of the sartorius mus:
:cle, beginning below, and extending
upwards, about 4 inches in length.
The inside, or inner half of the Sartorius
is dissected deliberately. It may be done
with the sharp edge of the ivory handle
more safely than with the knife-blade.
The artery lays just under the inner
edge of the sartorius muscle. There is a
fascia over the artery, to be carefully di:
:vided. When about 2 inches of the artery
are laid bare, and loosened by the
knife-handle from the cellular mem:
:brane

membrane which surrounds it, a needle-probe, bent a little, is passed under the artery, carrying along with it a doubled ligature of sufficient strength. By taking hold of both ends of the ligature, and pulling up the artery so as to prevent circulation, we can tell whether we have the main artery, by the cessation of pulsation at the sac. If we have, the ligature is cut at the eye of the probe, so as to make two ligatures,- and they are separated so as to tie in two places,- say an inch, or inch and an half apart. It the practice of Dr. P. to divide the artery, after it is thus tied, with a knife, or pair of sharp scissars; as he has found it to do better than when left without cutting. The wound is then dressed- A compress laid on each side, and sticking plaster over

over the wound, to draw the lips together [327]
and make as much heal by the first
intention as possible,- or it will be a
bad sore. At the conclusion of
this Lecture Dr. P. told us he had finished his
Course,- that he could have wished his Lec=
=tures had been more worthy of the attention
with which they were honored;- and after
wishing us a great deal of success in our prac:
=tice, and happiness through life, he
bade us Adieu.

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